

## PRELIMINARY ASSESSMENT

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# Atka Air Force Auxiliary Field Site Atka, Alaska

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Prepared for

U. S. Environmental Protection Agency, Region 10  
1200 Sixth Avenue  
Seattle, Washington 98101

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## Acronyms

AMSL	Above Mean Sea Level
BTEX	Benzene, toluene, ethylene, and xylenes
DRO	Diesel Range Organics
cfs	cubic feet per second
DOI	Department of the Interior
EPA	United States Environmental Protection Agency
FUDS	Formerly Used Defense Site
GRO	Gasoline Range Organics
Herrera	Herrera Environmental Consultants, Inc.
ug/kg	micrograms per kilogram
ug/L	micrograms per Liter
mg/kg	milligrams per kilogram
mg/L	milligrams per Liter
NALEMP	Native American Lands Environmental Mitigation Program
PA	Preliminary Assessment
PCBs	Polychlorinated biphenyls
PPE	Probable point of entry
RBSL	Risk Based Screening Level
RRO	Residual Range Organics
SVOCs	Semivolatile Organic Compounds
START	Superfund Technical Assessment and Response Team
TDL	Target distance limit
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VOC	Volatile Organic Compounds

## **1.0 Introduction**

Herrera Environmental Consultants, Inc. (Herrera) was tasked by the United States Environmental Protection Agency (EPA) to provide technical support for completion of a Preliminary Assessment (PA) at the Atka Airfield site near Atka, Alaska. Herrera completed PA activities under Technical Direction Document No. 01-07-0011, issued under EPA, Region 10, Superfund Technical Assessment and Response Team (START) Contract No. 68-S0-01-03.

The specific goals for the Atka Airfield site PA, identified by the EPA, are:

- Determine the potential threat to public health or the environment posed by the site; and
- Determine the potential for a release of hazardous constituents into the environment.

Completion of the PA included reviewing existing site information, collecting receptor information within the range of site influence, determining regional characteristics, and conducting a site visit. This document includes a discussion of background site information (Section 2), a discussion of migration/exposure pathways and potential targets (Section 3), a summary (Section 4), and references (Section 5).



## 2.0 Site Background

### 2.1 Site Identification

Site Name:	Atka Air Force Auxiliary Field site
CERCLIS ID No.:	AKN001002274
Location:	Atka Island, Alaska
Latitude:	52° 13' 13.25" N
Longitude:	174° 12' 22.86" W
Legal Description:	Township 92S, Range 177W, Umiat Meridian
Site Owner:	Axtam Corporation P.O. Box 47030 Atka, Alaska 99547
Site Owner:	City of Atka P.O. Box 47070 Atka, Alaska 99547 907-839-2233
Site Contact:	Mr. Raymond Golodoff, Environmental Coordinator Kaktovik Inupiat Corporation P.O. Box 47030 Atka, Alaska 99547

### 2.2 Site Description and Ownership Information

The Atka Air Force Auxiliary Field site is a Formerly Used Defense Site (FUDS) located on Atka Island, of the Aleutian Island archipelago in Alaska (Figure 2-1). Atka Island is approximately 1,100 air miles from Anchorage, Alaska. The site covers a 2-mile stretch of land that consists of several areas associated with former occupation of the island by the U.S. military during World War II, including: an airfield, a former generator building site, a former motor pool building site, a former hospital and associated Disposal Site (A), two landfill Disposal Sites (B and C) located in the vicinity of the airfield, a disposal site located near the city dock on the north end of Nazan Bay, and a fuel storage area located to the south of the village (Figure 2-2). Well maintained roads extend across the area.

Elevations at the site range from approximately 10 to 50 feet above mean sea level (amsl) (USGS 1959). Steep slopes consisting of a thick tundra base surround the site. Common vegetation includes Pacific Alder, low-lying willow, wild celery, and a variety of rye grass (Portage 2001).



Figure 2-1. Vicinity map, Atka Air Force Auxiliary Field site, Atka, Alaska.



The Axtam Corporation (the regional native corporation) and the City of Atka currently own the native village and most of the project site. A small portion of the project site may be on USFWS lands. The remainder of the island is part of the Aleutian Island Wilderness (USGS 1959). In June 1942, the U.S. Navy evacuated residents from the island and began military occupation of the island 2 months later. The native Aleuts returned to the island in late 1945 (USACE 1999). The U.S. Department of Defense transferred ownership of 6,800 acres of the island to the U.S. Department of the Interior (DOI) in 1953. The DOI transferred ownership of the project site to the Axtam Native Corporation by Interim Conveyance No. 159, dated February 27, 1979 (Portage 2001). No other historical ownership information is available.

## 2.3 Site Operational History and Waste Characteristics

In 1986, a U.S. Army Corps of Engineers (USACE) contractor was hired to demolish the abandoned military buildings at the site. Debris from the buildings, thousands of steel drums, over 400,000 square feet of steel runway matting, and other materials were land filled in five known disposal sites. No sampling for contaminants was performed (USACE 1999).

In June 1998 the USACE performed a Site Investigation on Atka Island. Six potential contaminant source areas were identified during the investigation. Samples collected at several of the source areas were analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, and asbestos (USACE 1999). The source areas are described below:

- An airfield generator building (T-241) and associated fuel storage tanks were located approximately 1,200 feet west of the runway. The building currently consists of a concrete pad approximately 20 feet by 30 feet. On the downgradient side of the building, a drainage pathway was noted. Soils in the drainage area immediately east of the foundation appeared stained and had distinct diesel fuel odor. Immediately west of the foundation, a flat vegetation-free area, approximately 4 feet by 6 feet, was observed. Soil in the vicinity of this area appeared to be stained and had a diesel fuel odor. Three samples were collected in this area and were found to contain up to 35,000 mg/kg RRO and 12,000 mg/kg DRO. Concentrations of benzene, toluene, ethylene, xylene (BTEX) and GRO were very low, when detected. Naphthalene (up to 8.3 mg/kg) and 2-methylnaphthalene (up to 5.2 mg/kg) were the only PAHs detected. No PCBs, pesticides, chlorinated solvents, or metals were detected at significant concentrations.
- A motor pool building (T-43) was located approximately 1,200 feet northwest of the runway; the building currently consists of a concrete pad and a drywell filled with rainwater. Near the northeast corner of the

foundation, a low mound of soil was observed to be stained black, overlain by a red precipitate. The water in the drywell was observed to have a sheen on it and the soil had a strong fuel odor. Three samples were collected in this area and found to contain up to 660 mg/kg RRO and 88 mg/kg DRO. Concentrations of BTEX and GRO were very low, when detected. Naphthalene (up to 0.35 mg/kg) and 2-methylnaphthalene (up to 0.1 mg/kg) were the only PAHs detected. No PCBs, pesticides, chlorinated solvents, or metals were detected at significant concentrations, except for a detection of 220 mg/kg of lead from a sample collected northeast of the foundation.

- A naval hospital complex and Disposal Site A is located near the southern shore of Korovin Lake. Villagers report that the hospital complex was bulldozed and covered with eight to twelve inches of soil. Signs warning of asbestos danger were reportedly posted, but are no longer visible (Golodoff 2001). The disposal area cover appeared to be in adequate condition and sparsely covered by vegetation. Three samples were collected in this area and found to contain up to 320 mg/kg RRO and 82 mg/kg DRO. Concentrations of BTEX and GRO were very low, when detected. No PAHs, PCBs, pesticides, or chlorinated solvents were detected at significant concentrations. Metals concentrations were within background levels, except for cadmium (46 mg/kg), lead (110 mg/kg), and vanadium (200 mg/kg).
- Disposal Site B is located on a strip of land between the airport hanger and the Atka School. The disposal site is a wind-scoured strip of sand dunes, sparse vegetation, and metal debris exposed in the low areas. The metal debris is predominantly rusted fragments of the Marston (airstrip) matting, wood, and drums. No samples were collected from this location.
- Disposal Site C was not accurately located, but generally described between the airstrip and Nazan Bay. Recent erosion has begun to expose Marston matting and several empty drums that appeared to be welded together to make culverts. Trace concentrations of RRO (16 mg/kg) and DRO (3.8 mg/kg) were detected in the sample collected at this location; no PCBs, PAHs, pesticides, chlorinated solvents, or significant concentrations of metals were detected.
- A potential military disposal site was reported near the village dock and Dock creek. Nearby villagers reported that the creek had a sheen and a fuel odor when under high water conditions. Trace concentrations of RRO were detected in the sample collected in this area; no DRO, BTEX, PCBs, PAHs, metals, or pesticides were detected at significant concentrations.



- A radar station and radio relay site located at Cape Kudagnak, approximately 5 miles to the east, supported the Atka Air Force Auxiliary Field during operations. No apparent environmental removal or restoration actions appear to have occurred here. This site included two small camps that contained debris, possible transformers, a large above-ground storage tank, and batteries. Samples collected in this area were found to contain up to 2,800 mg/kg RRO and 26,000 mg/kg DRO. Naphthalene (up to 1.0 mg/kg) and 2-methylnaphthalene (up to 0.53 mg/kg) were the only PAHs detected. PCBs were detected in concentrations of 0.30 to 2.30 mg/kg in soil samples collected near suspected transformers. No pesticides or BTEX were detected at significant concentrations. Lead was detected at a concentration up to 49,000 mg/kg in the area containing batteries. A sample from a refrigeration unit was determined to contain asbestos.

Portage Environmental, Inc. conducted a Phase 1 Assessment Report in February 2001 under the Native American Lands Environmental Mitigation Program (NALEMP). Portage concluded that further assessment was needed at sites identified during the USACE 1999 investigation due to sufficient unknowns associated with the site. They concluded the USACE was proceeding with the appropriate actions to further evaluate the site and that no additional action under NALEMP was required (Portage 2001).

## 2.4 START Site Visit

START personnel performed a site visit August 22 through 24, 2001; photographic documentation is provided in Appendix A. Raymond Golodoff, the Environmental Coordinator for the Atka Village Council, was present throughout most of the site visit. START personnel inspected all areas of potential contamination identified in the USACE 1999 site investigation, except Cape Kudagnak. In addition to the areas identified by the USACE, START investigated a reported fuel disposal area located south of the village along Puganax creek. The site was characterized, potential receptor targets identified, and limited sampling of soils and surface water performed. START personnel interviewed local villagers in Atka regarding subsistence hunting and fishing use of the site and surrounding areas.

Jagged pieces of metal and various other debris were observed protruding from soils in the Disposal Sites B and C.

The disposal site near Puganax Creek was reported to contain nearly 100 drums, which were buried when a nearby bluff sloughed and covered them. The area has been graded and a tank farm constructed on top of the disposal site (Golodoff 2001). Approximately 20 drums were observed in and around Puganax creek. One drum located within 50 feet of the creek and Nazan Bay was observed to be leaking a black, oily substance.

The disposal site near Dock Creek was observed to contain metal floats from anti-submarine netting. Within Dock Creek, START observed an orange precipitate on the streambed.

A stream west of the village and upgradient of the site was documented as the drinking water supply for village residents. It was observed to have a wooden weir and water impoundment for drinking water collection. START estimated that this site is at least 100 vertical feet upgradient from any sources identified at the site. All other areas observed at the site appeared as described in the previous USACE Site Investigation.

Five surface soil/sediment samples and one surface water sample were collected near potential sources (Figure 2-2). Sample ATKA01SS was collected from stained soils next to a drum full of unknown contents located near the mouth of Puganax Creek. Samples ATKA02SD and ATKA02SW were collected from Korovin Lake, where water from a seep near the former hospital complex flows into the lake. Sample ATKA03SD was collected from a side channel of Dock Creek, north of the bridge, near a reported disposal site. Sample ATKA04SD was collected from the drywell near the motor pool site. Sample ATKA05SD was collected from a roadside ditch downgradient of the motor pool site, where a noticeable sheen was observed on soils.

Samples were analyzed for BTEX using EPA method 8021B, PCBs using EPA method 8082, TAL metals using EPA method 6010, SVOCs using EPA method 8270C, and petroleum products using Alaska methods 101, 102, and 103. Analytical results, summarized in Table 2-1, indicate low concentrations of petroleum product present in both soil and water; and SVOCs and metals detected in soils. Complete analytical results of samples collected during the START site visit are presented in Appendix B.



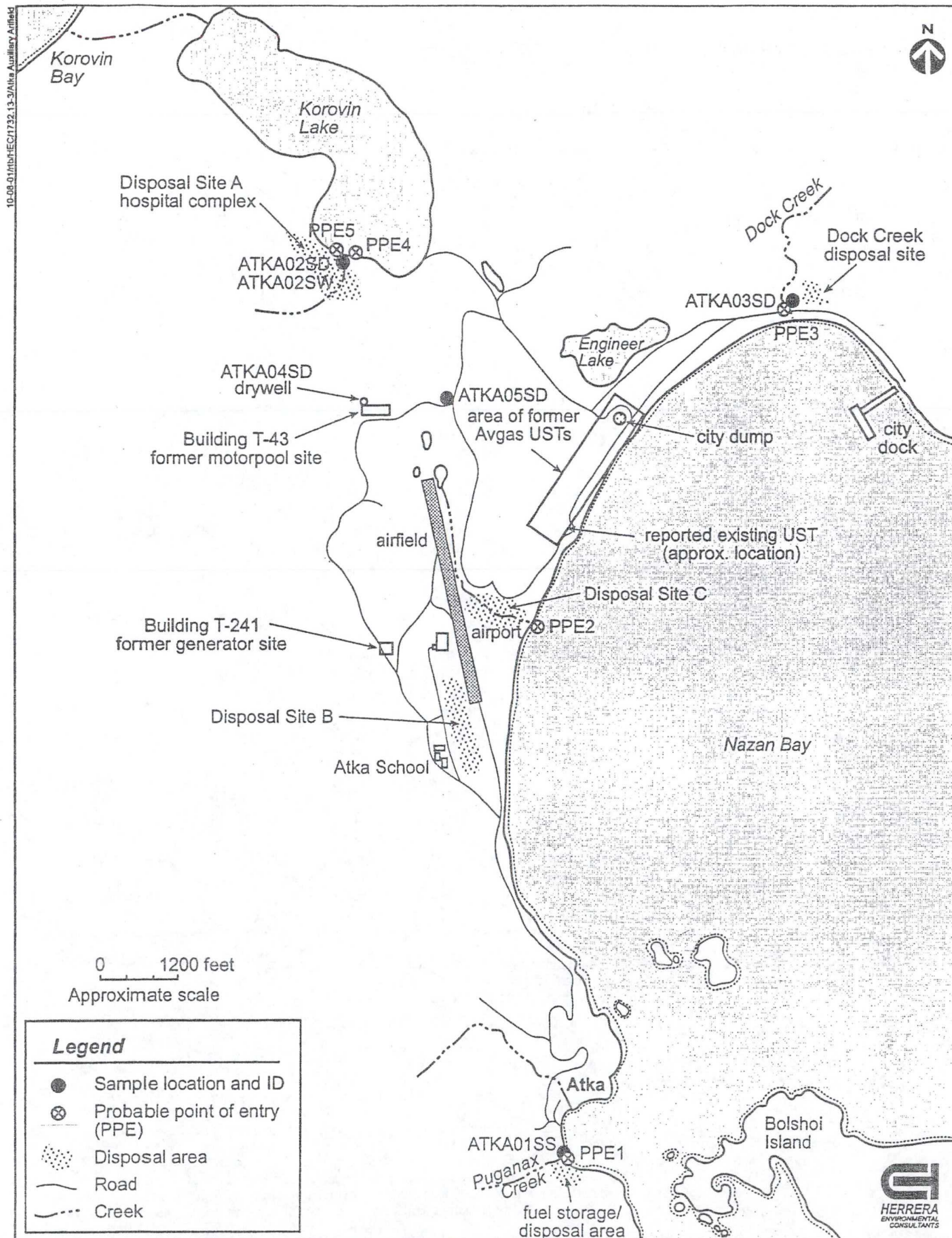


Figure 2-2. Site location map, Atka Air Force Auxiliary Field site, Atka, Alaska.

Table 2-1. Analytical results summary, Atka Air Force Auxiliary Field Site, Atka, Alaska.

Sample Number	Soil and Sediment Samples					Surface Water Sample
	ATKA01SS	ATKA02SD	ATKA03SD	ATKA04SD	ATKA05SD	ATKA02SW
<b>Petroleum Hydrocarbons</b>						
(mg/kg)						(mg/L)
GRO (nC6-nC10)	6.9	1.1 U	1.2 U	3.9 U	0.94 U	0.05 U
DRO (nC10-<nC25)	4800	43 U	41 U	160 X	43 U	0.098 U
RRO (nC25-nC36)	27000 E	43 U	41 U	300 X	28 J X	0.098 U
<b>BTEX (µg/kg)</b>						
						(µg/L)
Benzene	150	11 U	12 U	39 U	9.4 U	0.5 U
Toluene	60	23 U	23 U	78 U	19 U	1 U
Ethylbenzene	74	23 U	23 U	78 U	19 U	1 U
m, p-Xylenes	430	45 U	46 U	160 U	38 U	0.37 J
o-Xylene	900	23 U	23 U	78 U	19 U	0.29 J
<b>SVOCs (µg/kg)</b>						
						(µg/L)
Benzoic Acid	4400 U	40 U	41 U	42 J	44 U	1.1 U
Naphthalene	1100	1.6 U	1.6 U	6 U	1.8 U	0.11 U
2-Methylnaphthalene	3600	1.6 U	1.6 U	6 U	1.8 U	0.11 U
Fluorene	330	1.6 U	1.6 U	6 U	1.8 U	0.11 U
Pentachlorophenol	1800 U	16 U	16 U	860	18 U	1.1 U
Di-n-butylphthalate	6700 J	81 U	82 U	54 J	88 U	5.3 U
bis(2-Ethylhexyl)phthalate	1200 J	40 U	9 J	45 J	44 U	1.1 U
Benzo(a)pyrene	180 U	1.6 U	1.6 U	6 U	1.9	0.11 U
<b>Metals (mg/kg)</b>						
						(mg/L)
Arsenic	84	6.7	4.8	8.6 U	4.1	0.01 U
Antimony	2.6 J	2 J	11 U	7.1 J	12 U	0.026 J
Barium	19	39	13	46	26	0.0041 J
Cadmium	0.77 J	1.3 U	1.1 U	3.3 J	1.2 U	0.005 U
Chromium	40	3.7	3.3	10	5.2	0.01 U
Cobalt	15	13	11	12	12	0.005 U
Copper	74	49	43	110	38	0.0056 J
Lead	29	13 U	11 U	160	12 U	0.01 U
Manganese	1100	940	280	78	300	0.019
Nickel	27	8.9	9.1	11	8.5	0.01 U
Silver	1.5 J	3.1 J B1	1.3 J B1	43 U	12 U	0.0096 J
Vanadium	56	87	63	97	71	0.005 U
Zinc	2700	46	21	1500	24	0.0074 J
Mercury	0.052	0.015 J	0.038	0.18	0.026 J	0.0002 U

Bold type indicates sample concentrations above method detection limits.

GRO Gasoline Range Organics (carbon chain length range between 6 and 10).

DRO Diesel Range Organics (carbon chain length range between 10 and 25).

RRO Residual Range Organics (carbon chain length range between 25 and 36).

SVOC Semivolatile Organic Compounds.

mg/kg milligrams per kilogram.

mg/L milligrams per liter.

µg/kg micrograms per kilogram.

µg/L micrograms per liter.

E The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.

J The analyte was positively identified; the associated numerical value is an estimated value between the method detection limit and practical quantitation limit.

U The analyte was not detected; the associated numerical value is the practical quantitation limit.

X Contaminant does not appear to be "typical" petroleum product, likely due to aging and degradation.

B1 This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank.)



## 3.0 Migration/Exposure Pathways and Targets

### 3.1 Ground Water Pathway

No qualitative or quantitative data exists to indicate a release to ground water has occurred. The island consists of two distinct geological units; the southwest region is a geologically older eroded area and the northern portion is younger and more rugged. The northern region includes the volcanic areas of Mount Kliuchef and Korovin Volcano. All of the volcanic features rest on a large shield composed of numerous mafic flows. To the west of the volcanic areas is a large rectangular landmass connected by a spit. This is the remnant of the older volcanic center. Bedrock in the area consists of basalts, andesites, and breccias. Soils at the site are derived from weathered byproducts of the volcanic rocks and consist of coarse textured sandy soils exhibiting a high infiltration rate (USACE 1999).

Ground water is not used for drinking water or for irrigation within four miles of the site. The openings in the igneous rocks are volumetrically very small and poor sources for ground water. Additional information regarding aquifers is not available. START estimates the net precipitation is greater than 30 inches per year. There are approximately 98 residents within a 4-mile radius of the site (Figure 3-1; EPA 2001). The site is not located within a wellhead protection area (EPA 2001).

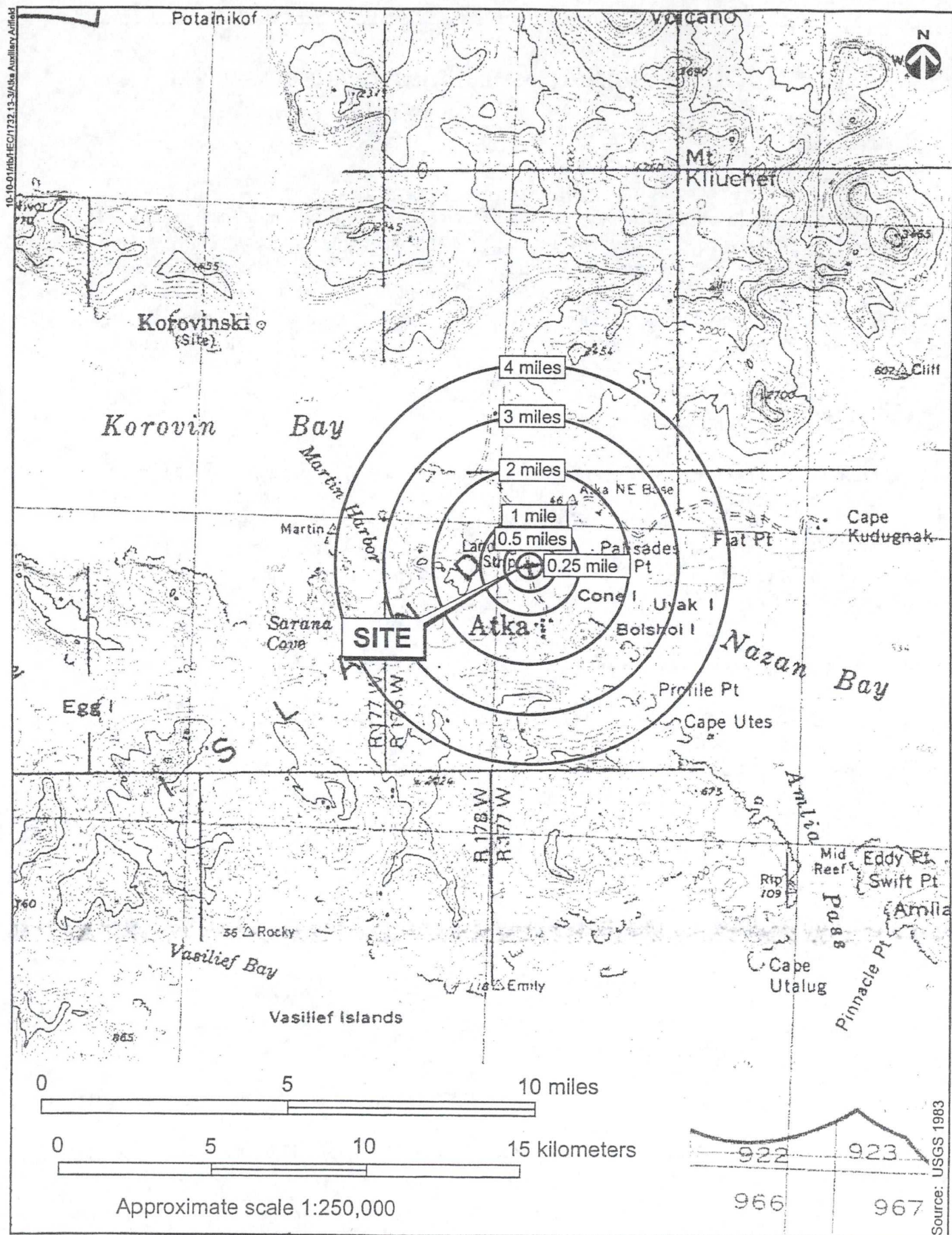
### 3.2 Surface Water Pathway

Quantitative data exist to indicate an observed release to surface water. Low levels of xylenes were detected in the surface water sample collected in Korovin Lake; BTEX and SVOCs were detected at significant concentrations in soil samples collected at sources that drain to surface water bodies (Table 2-2).

Contaminant sources at the site are located within 0.5 mile upstream of Nazan Bay and within one mile upstream of Korovin Bay. Surface water from the site generally drains to the bays through sheet flow, ground water infiltration and discharge, or by several small creeks. Surface water from the former hospital complex area flows through Korovin Lake before draining to Korovin Bay.

Multiple Probable Points of Entry (PPE) exist at the site (Figures 2-2 and 3-2). PPE1 is located in Puganax Creek, approximately 50 feet upstream from its confluence with Nazan Bay, where several drums are located in and around the water. The 15-mile target distance limit (TDL) associated with PPE1 begins at this point, extends approximately 50 feet downstream into Nazan Bay, and then continues 15 miles into the bay. PPE2 is located at the confluence of an unnamed creek and Nazan Bay, on the western side of the airfield downstream of Disposal Site C. The TDL associated with PPE2 extends 15 miles into Nazan Bay. PPE3 is located in Dock Creek approximately 100 yards upstream of its confluence with Nazan Bay. It is reported that a







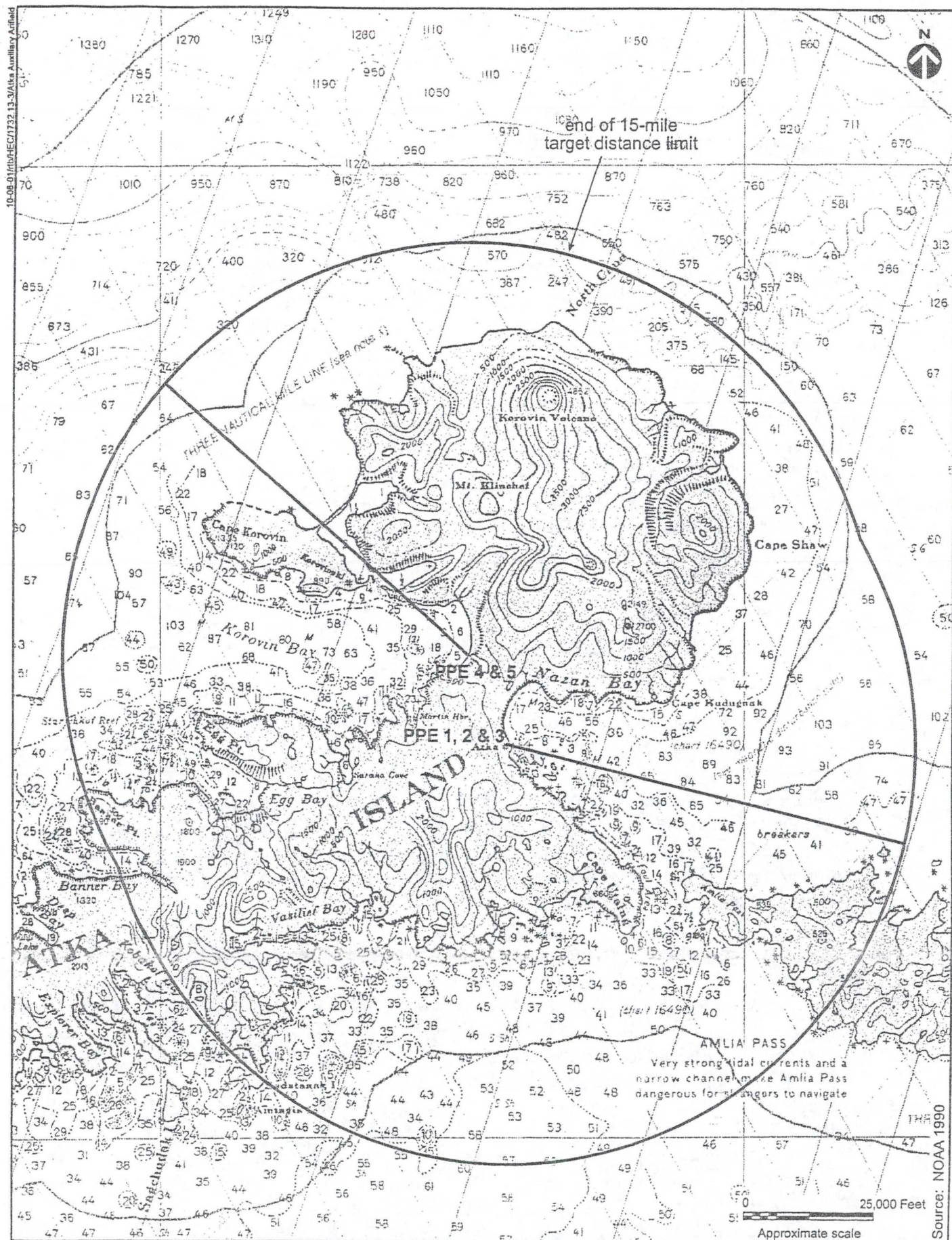


Figure 3-2. Fifteen-mile target distance limit map, Atka Air Force Auxiliary Field site, Atka, Alaska.



military disposal site may be located in this area (USACE 1999). The TDL associated with PPE3 begins at this point, extends approximately 100 yards to Nazan Bay, and then continues 15 miles into Nazan Bay. PPE4 is located approximately 100 yards upstream of Korovin Lake, south of the former hospital complex and Disposal Site A, within an unnamed creek that flows into the lake. The 15-mile TDL follows the unnamed creek into Korovin Lake, extends through an unnamed creek between Korovin Lake and Korovin Bay, and continues the remainder of the 15 miles into Korovin Bay. PPE5 is located at a seep downgradient of Disposal Site A that flows into Korovin Lake, approximately 50 feet west of the unnamed creek. The 15-mile TDL extends approximately 0.5 miles through Korovin Lake, continues through the unnamed creek between Korovin lake and Korovin Bay, and then continues the remainder of the 15 miles into Korovin Bay.

The site is not assumed to lie within a floodplain. The 2-year, 24-hour rainfall value for Atka is not available; the value for Adak, Alaska, located approximately 100 miles west of Atka, is 2.13 inches (Ashby 2001). The yearly average total precipitation for Adak is 61.50 inches (WRCC 2001). The upland drainage area of the site is approximately 7,500 acres (USGS 1959). Soils at the site consist of coarse sands that exhibit a fast infiltration rate (USACE 1999).

Surface water is not used for drinking water purposes within the identified 15-mile TDLs. Drinking water is supplied by a stream located approximately 0.5 miles southwest of town and approximately 100 feet upgradient of any identified contamination sources. The water is stored in two 30,000-gallon water tanks before distribution (Portage 2001).

Areas within the TDLs are used for commercial, subsistence, and sport fishing. Atka Pride Seafoods operates seasonally to serve the local 45-boat fleet. A majority of the commercial fish harvest occurs off-shore and beyond the 15-mile TDL, although some commercial fishing is reported to occur approximately 12 to 15 miles from shore (Golodoff 2001). The commercial fish harvest within the 15-mile TDL is unknown. Subsistence fishing occurs in Nazan Bay, Korovin Lake, and Engineer Lake. The total estimated subsistence and sport fish harvest within Korovin Lake, Nazan, and Korovin Bays is unknown (Golodoff 2001). In addition to subsistence fishing in Korovin and Engineer lakes, waterfowl are hunted for human consumption. Shellfish also are collected for human consumption from Nazan Bay (Golodoff 2001).

Several threatened and endangered species have been documented within the 15-mile TDL. The Stellar sea-lion (*Eumetopias jubatus*) and Humpback whale (*Megaptera novaeangliae*), both federal- and state-listed endangered species, have been observed within the 15-mile TDL (Smith 2001). The Short-tailed Albatross (*Phoebastria albatrus*), a federal-listed and state-listed endangered species, has been observed in the vicinity of Atka (Swem 2001; Balough 2001). The Stellars Eider (*Polysticta stelleri*), a federal- and state-listed threatened species is known to use areas within the 15-mile TDL (Balough 2001). The Northern Sea-Otter (*Enhydra lutris*), a federal-listed candidate species is known to use the near-shore areas within the 15-mile TDL (Doroff 2001). Puganax Creek was observed by the START during the site visit to be a migratory pathway for Pink salmon (*Oncorhynchus gorbuscha*). Surface waters within the 15-mile TDL of the site are used as a migratory corridor for Pink salmon, Coho salmon (*Oncorhynchus kisutch*), and Sockeye salmon (*Oncorhynchus nerka*; Golodoff 2001).



The Alaska Maritime National Wildlife Refuge is located on all public-owned lands in the coastal waters and adjacent seas of Alaska. According to the United States Fish and Wildlife Service, several areas of public-owned lands exist within ten miles of the site (Brewer 2001; USGS 1959). It is assumed that portions of the Alaska Maritime National Wildlife Refuge are located within the 15-mile TDL of PPEs 4 and 5 (Brewer 2001; USGS 1959). START personnel did not observe any wetland areas during the site visit. No other wetlands information is available.

### 3.3 Soil Exposure Pathway

Quantitative data exist to indicate an observed release to site soil has occurred. SVOCs were detected in sample ATKA04SD collected from the dry well at the motor pool building, and significant amounts of BTEX and SVOCs were detected in sample ATKA01SS collected near Puganax Creek (Table 2-1).

Access to the Atka Air Force Auxiliary Field site is unrestricted. No permanent residences or daycare facilities are located within 200 feet of a potential source. The Yakov E. Netsvetov School (K through 12) is located approximately 150 feet west of Disposal Site B. There are 19 students and three staff present at the school (ADCED 2001). No resources, such as commercial agriculture or silviculture, are present at or near the site. No terrestrial sensitive environments are located at or near the site (Swem 2001). Reindeer are hunted in the uninhabited western areas of the island, far removed from any sources of potentially hazardous substances (Golodoff 2001). There are approximately 36 permanent residents within a 1-mile radius of the site (Figure 3-1; EPA 2001).

### 3.4 Air Migration Pathway

No qualitative or quantitative evidence exists to indicate that a release to air has occurred. A total of 98 individuals reside within a 4-mile radius of the site (Table 3-1). A school is located approximately 150 feet from a reported source (Disposal Site B), with 19 students and three teachers (ADCED 2001).

**Table 3-1. Resident population by distance ring within a 4-mile radius, Atka Air Force Auxiliary Field Site, Atka, Alaska**

Distance Ring (miles)	Population
0–0.25	3
0.25–0.5	8
0.5–1	25
1–2	37
2–3	24
3–4	1
Total	98

Source: EPA 2001

Surface waters within a 4-mile radius of the site are used as a migratory pathway for Pink salmon (*Oncorhynchus gorbuscha*), Coho salmon (*Oncorhynchus kisutch*), and Sockeye salmon (*Oncorhynchus nerka*; Swem 2001). The Aleutian Islands Wilderness Area is located approximately 15 miles southwest of the site (USGS 1959). The Alaska Maritime National Wildlife Refuge is located on all public-owned lands in the coastal waters and adjacent seas of Alaska. According to the United States Fish and Wildlife Service, several areas of public-owned lands exist within 10 miles of the site (Brewer 2001; USGS 1959). There are no workers on site and no resources within a 0.5-mile radius of the site. No wetlands are known to exist within a 4-mile radius of the site, and National Wetland Inventory information in the vicinity of the site is not available.



## 4.0 Summary

The Atka Air Force Auxiliary Field site covers a two mile long strip of land bordering Nazan Bay that includes several military building and disposal sites. Portions of the disposal sites are beginning to erode, exposing some contents.

The USACE conducted a site investigation in 1998 identifying numerous contaminant source areas. Based on a review of the available documents, it appears that further investigation is planned by the USACE (Portage 2001).

Drums were observed in and around several surface water bodies at the site; one drum was observed to be leaking, the remainder were empty. The disposal sites and former operational areas are located in the vicinity of the village of Atka and are freely accessible to the residents of Atka.

Surface water has a high potential for contamination at numerous locations from hazardous substances identified to be present in the drums and disposal sites based on USACE and START sampling results. Present or former contents of drums pose a potential threat to on-site surface waters. One surface water sample collected from Korovin Lake exhibited low xylenes concentrations, but no other contaminants of concern. Surface soil and sediment samples collected at sources within the overland surface water route indicate the presence of BTEX and SVOCs. Hazardous substances identified by the USACE could be expected to migrate to surface water bodies. Local residents practice subsistence hunting and fishing within the 15-mile TDL.

Releases to soil have a high potential to pose a threat to the environment or human targets due to their accessibility and proximity to the school and village.

No data exist to indicate a release to ground water; ground water is not used for any purposes in the area. The ground water pathway is not expected to pose a threat to the environment or human targets.

A release to the air pathway is possible, due to exposed debris and soil at the disposal sites and exposed soil in the vicinity of drums observed on site. Atka experiences a mean wind velocity of 13 knots and storms may produce winds over 120 knots (USACE 1999).

## 5.0 References

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## APPENDIX A

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# Photographic Documentation

## Atka Air Force Auxiliary Field Site Preliminary Assessment Photographic Log

Photo Number	Date	Time	Direction	By	Description
1	8/22/01	1320	SE	DB	Drum dump south of Atka.
2	8/22/01	1325	SE	DB	Village of Atka, drum dump in background.
3	8/22/01	1333	SE	DB	Drinking water impoundment at village drinking water source.
4	8/22/01	1441	N	DB	Discolored water in Dock Creek.
5	8/22/01	1502	E	DB	Motor pool building pad.
6	8/22/01	1505	SE	DB	Dry well at motor pool.
7	8/23/01	1020	W	DB	Drums in Puganax Creek.
8	8/23/01	1025	W	DB	Leaking drum near Puganax Creek.
9	8/23/01	1105	W	DB	ATKA01 sample location.
10	8/23/01	1112	W	DB	5-gallon pail with oily liquid near ATKA01 sample location.
11	8/23/01	1116	E	DB	Debris at ATKA01 location.
12	8/23/01	1116	N	DB	Battery at ATKA01 location.
13	8/23/01	1140	S	DB	Seepage from under ASTs.
14	8/23/01	1140	S	DB	Seepage from under ASTs.
15	8/23/01	1230	S	DB	Sheen at ATKA05 location, motor pool area in background.
16	8/23/01	1320	W	DB	Disposal Site A
17	8/23/01	1320	SW	DB	Disposal Site A
18	8/23/01	1342	S	DB	Seep, Disposal Site A in background
19	8/23/01	1342	N	DB	Seep, Korovin Lake beyond
20	8/23/01	1405	N	RG	Sampling at Korovin Lake
21	8/23/01	1605	SW	DB	Sample location ATKA03 - Dock Creek
22	8/23/01	1605	SW	DB	Sample location ATKA03, closeup.
23	8/23/01	1634	NE	DB	Former Generator Building.
24	8/23/01	1636	E	DB	Former Generator Building
25	8/23/01	1710	SE	DB	Aircraft fuel tank in Disposal Site B.
26	8/23/01	1711	NW	DB	Drum and aircraft fuel tank in Disposal Site B.
27	8/23/01	1720	E	DB	School playground with Disposal Site B debris in background.
28	8/23/01	1722	E	DB	Metal landfill debris across road from school.
29	8/23/01	1725	W	DB	Metal landfill debris across road from school.
30	8/23/01	1735	W	DB	Drums in Disposal Site B east of school.
31	8/23/01	1741	SW	DB	Eroded landfill cap at Disposal Site B; school in background.
32	8/23/01	1745	NE	DB	Disposal Site B.
33	8/23/01	1747	NE	DB	Disposal Site B.
34	8/23/01	1800	SW	DB	Disposal Site C, residences and school in background.
35	8/23/01	1810	SW	DB	Disposal Site C.
36	8/23/01	1515	NW	DB	Disposal Site B, school in background.
37	8/23/01	1127	Down	DB	Dry well at motor pool building after purging standing water.
38	8/23/01	1127	Down	DB	Sample ATKA04 at dry well.
39	8/23/01	1148	S	DB	ATKA05 sample location.
40	8/23/01	1148	S	DB	ATKA05 sample location at culvert

N – North

S – South

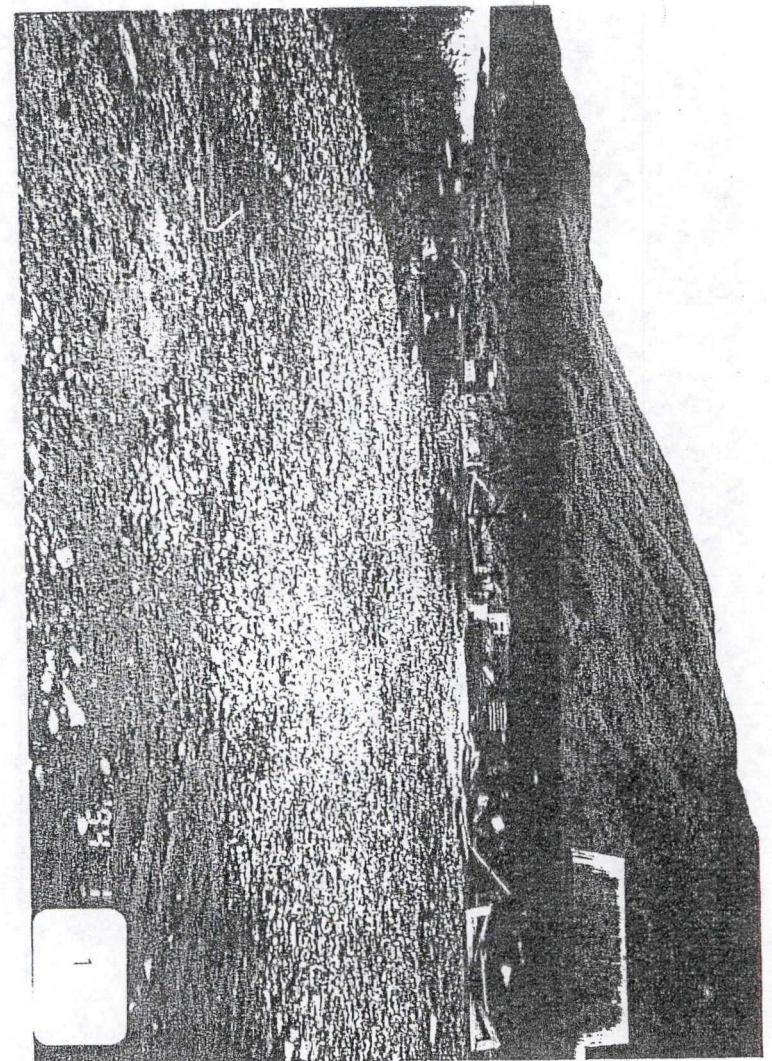
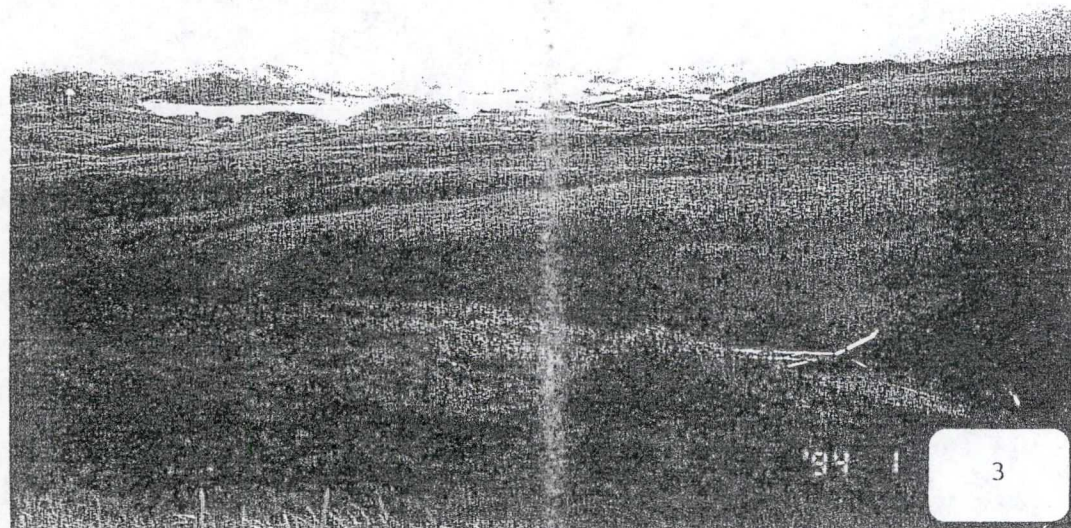
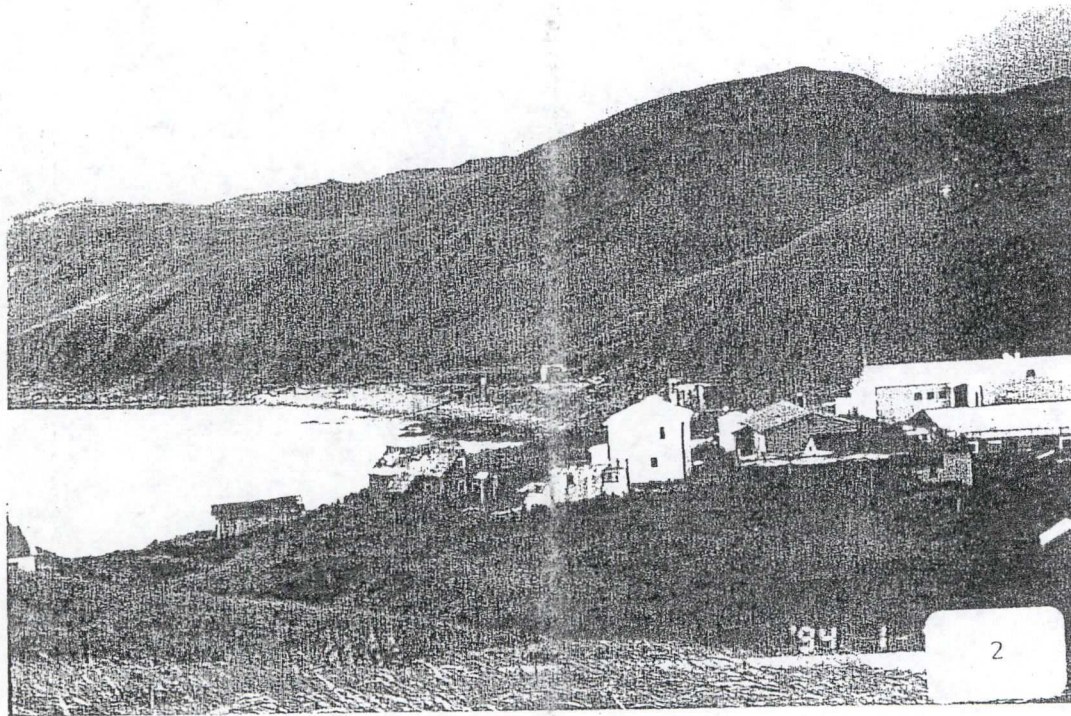
E – East

W – West

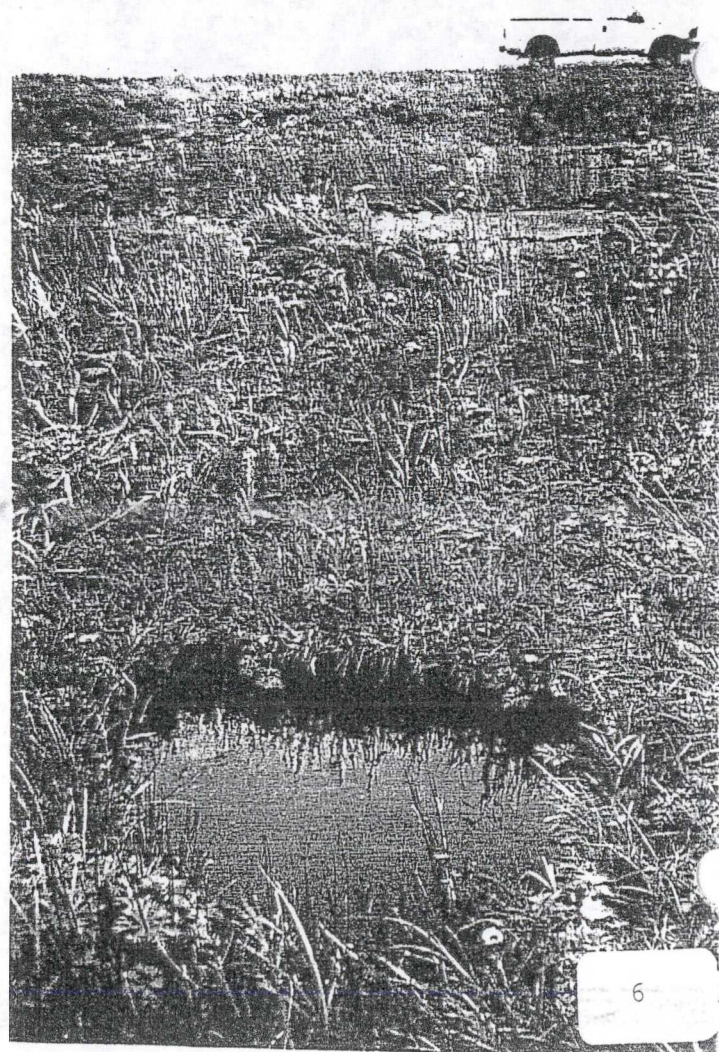
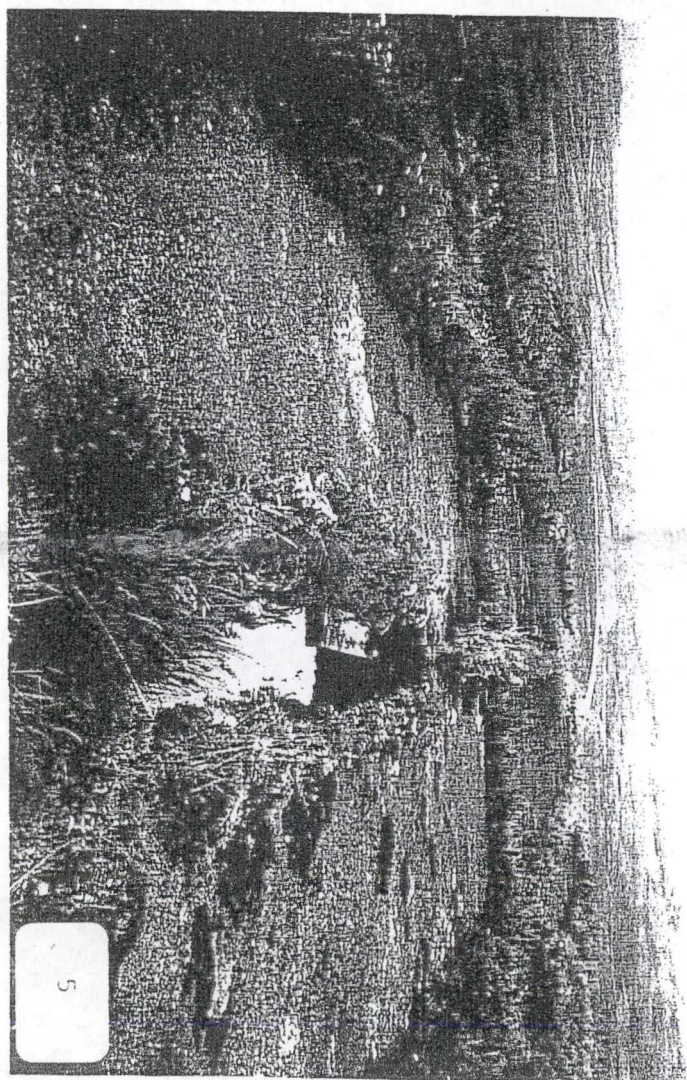
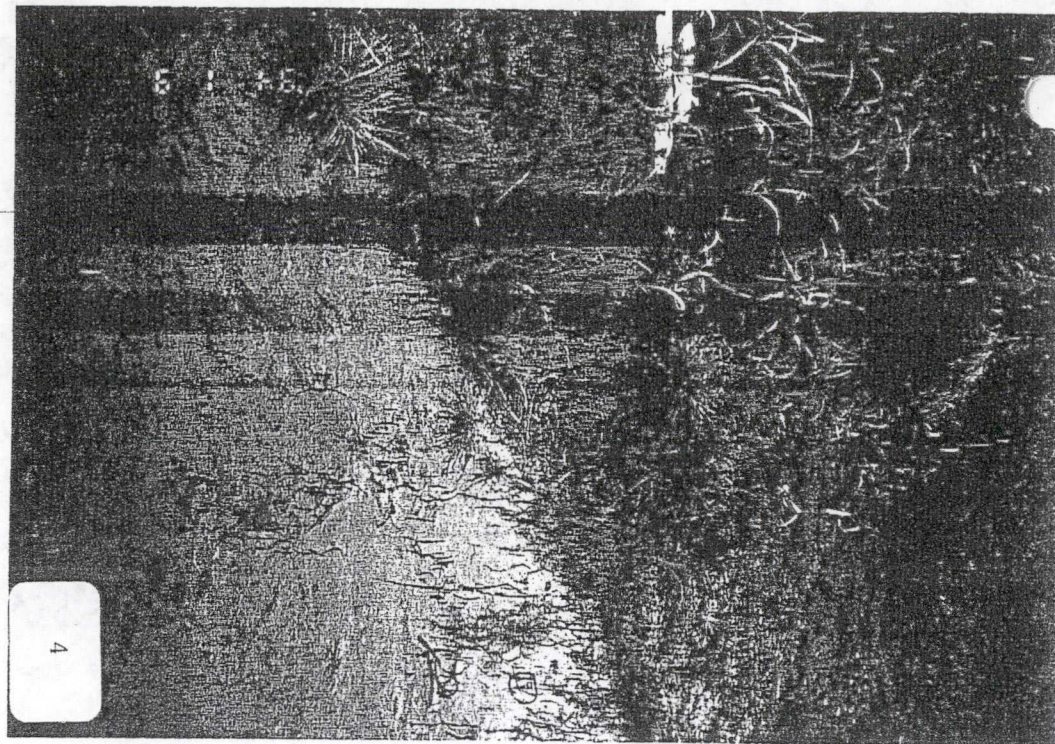
DB – David Brown

RG – Raymond Golodoff

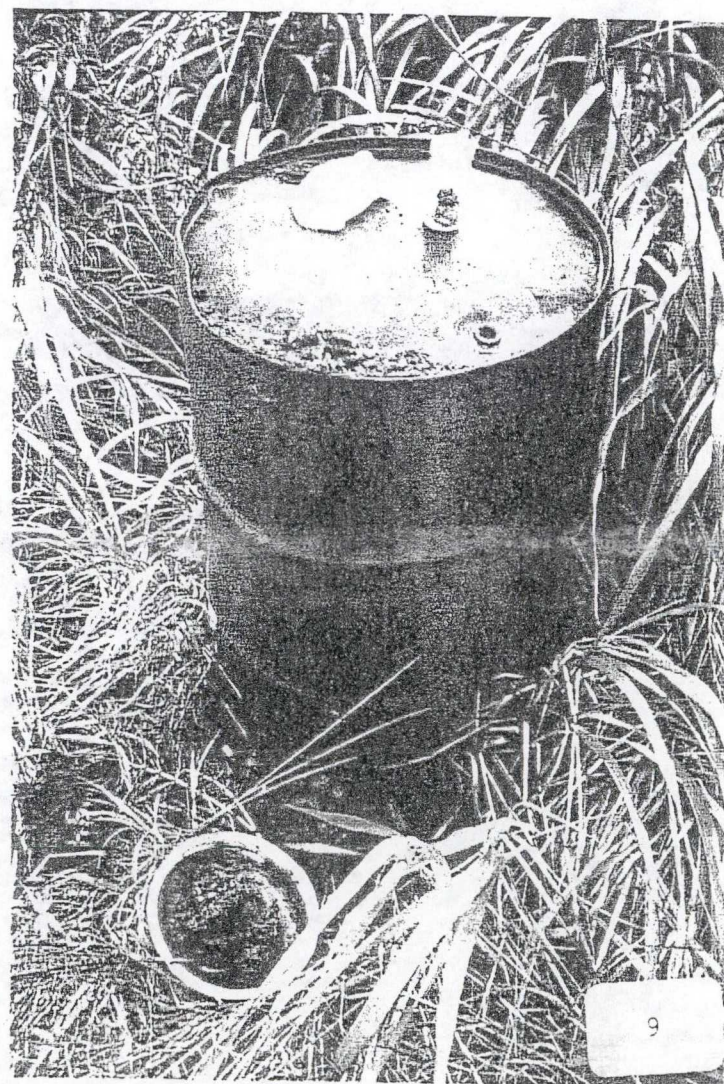
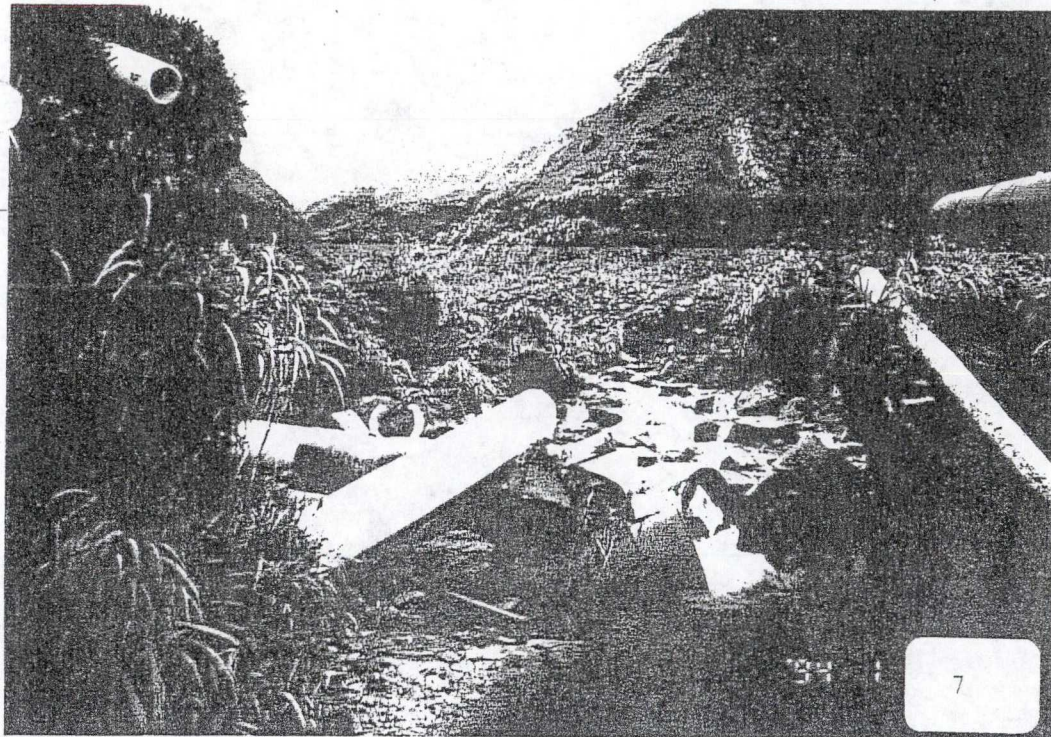




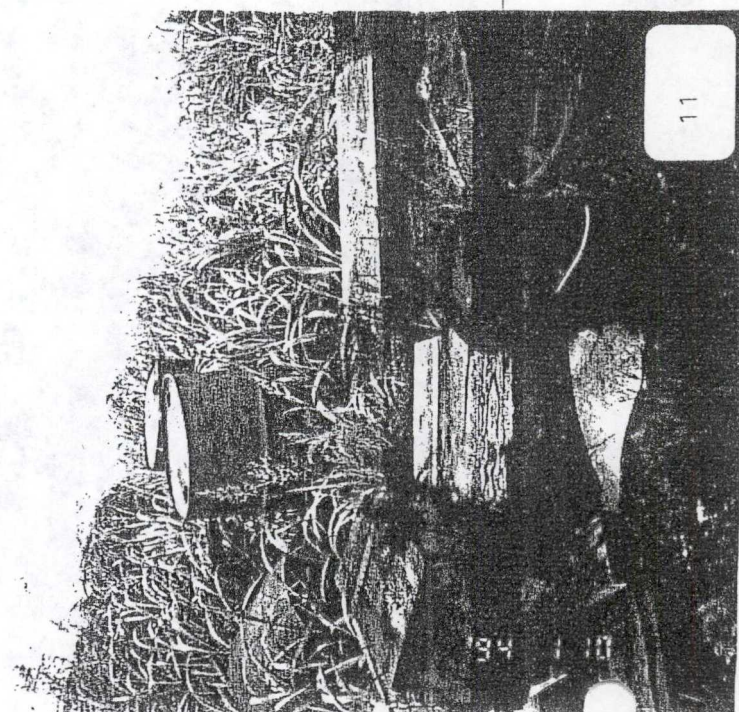
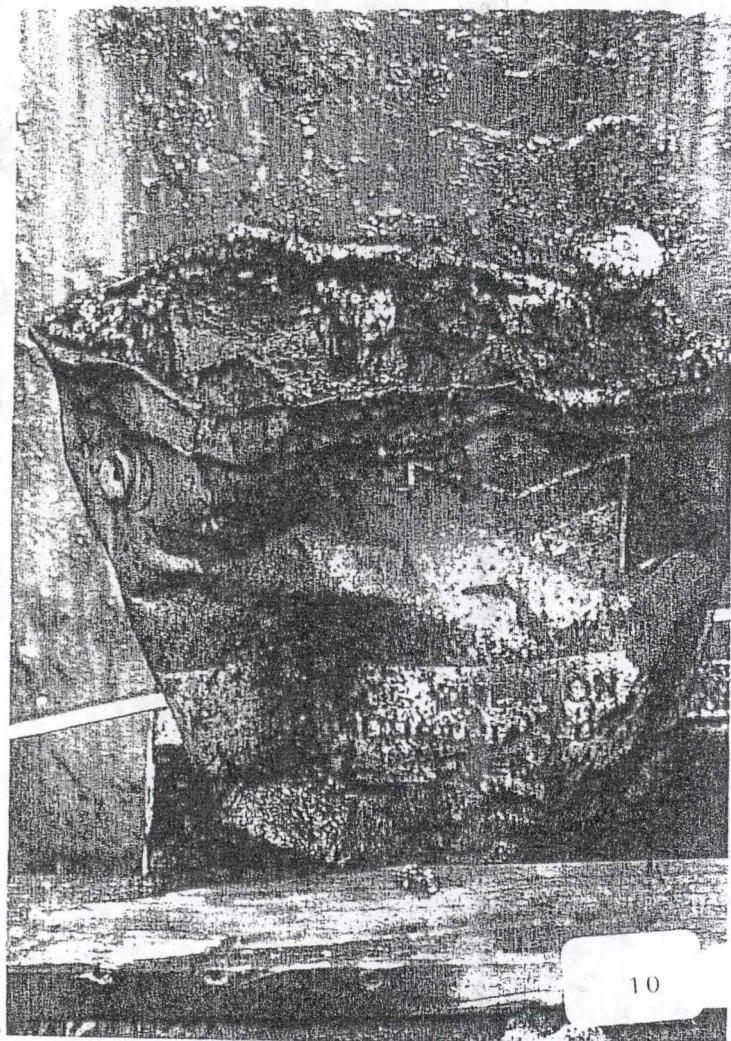




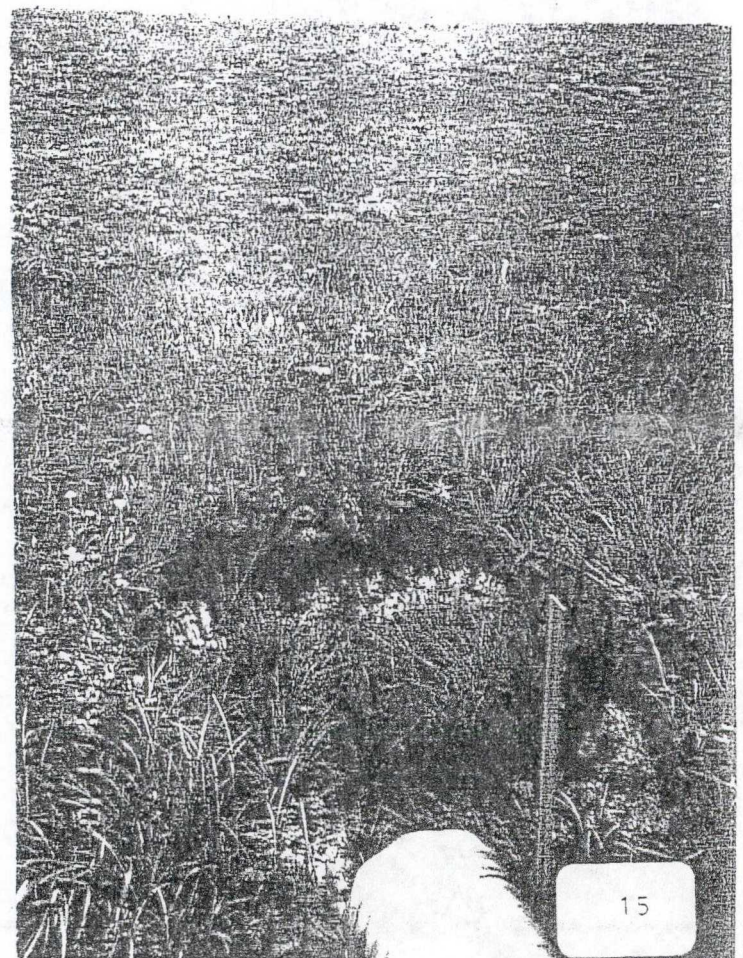
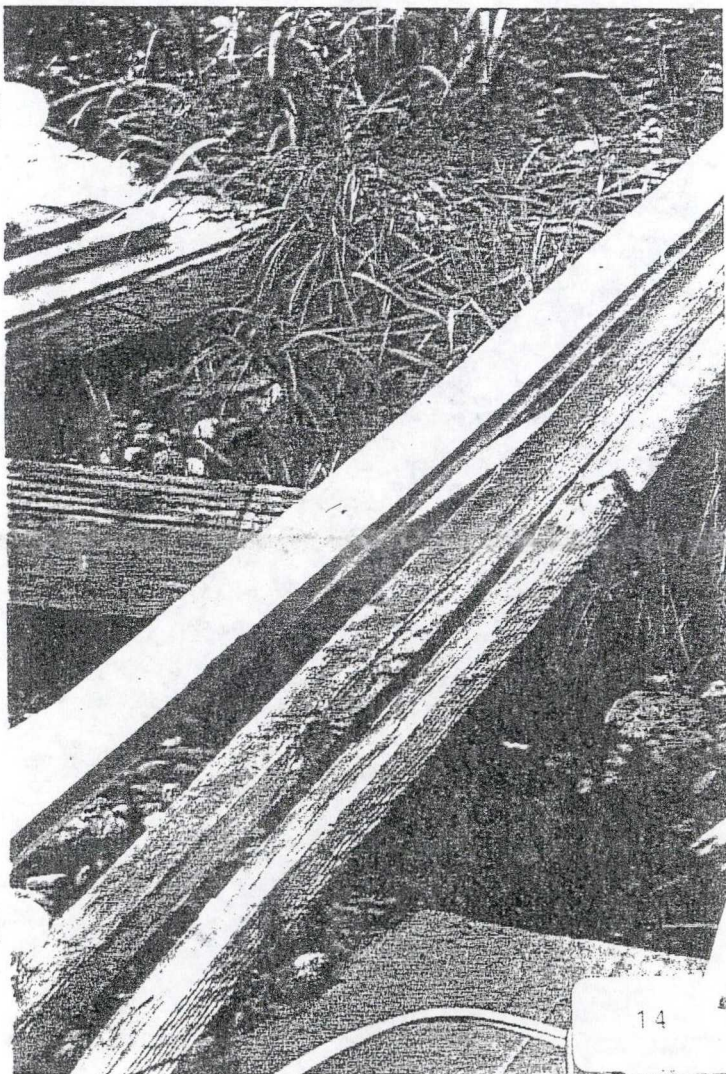
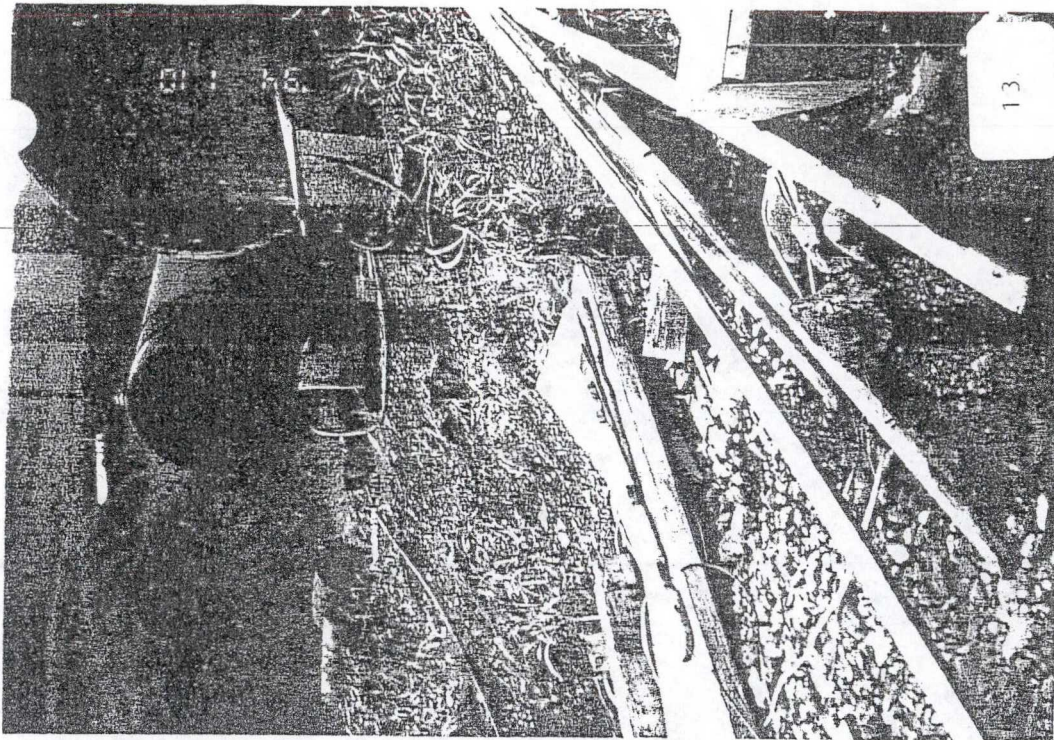




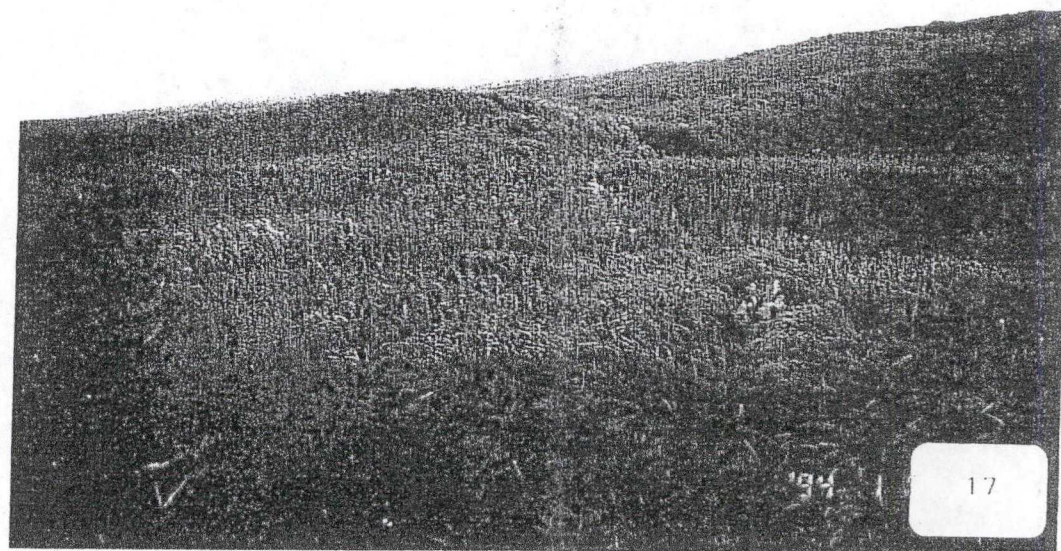
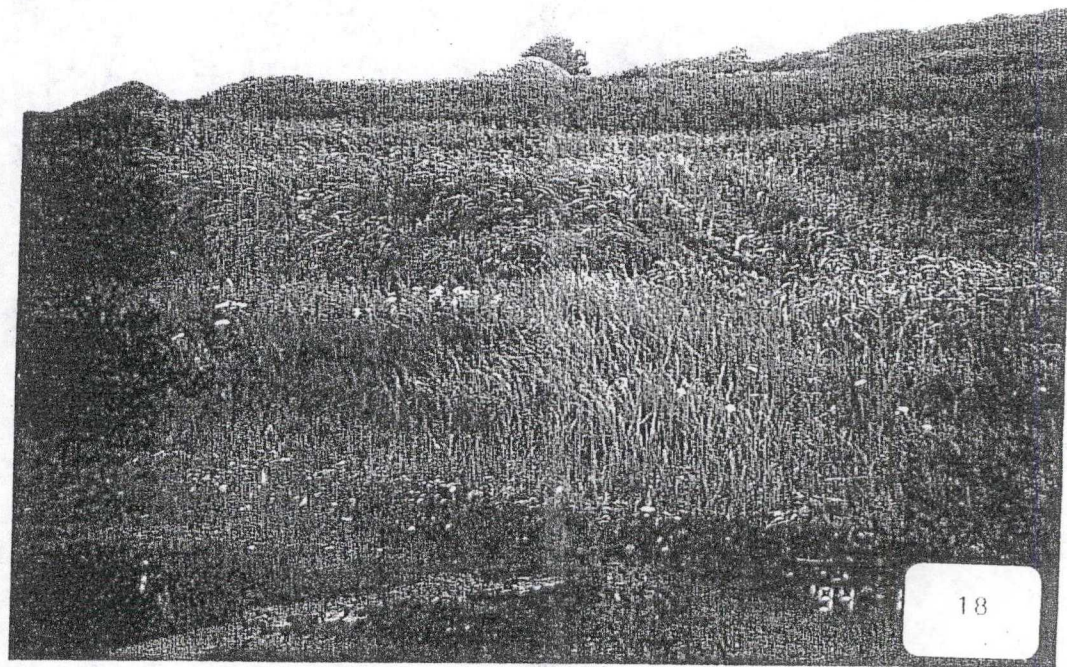
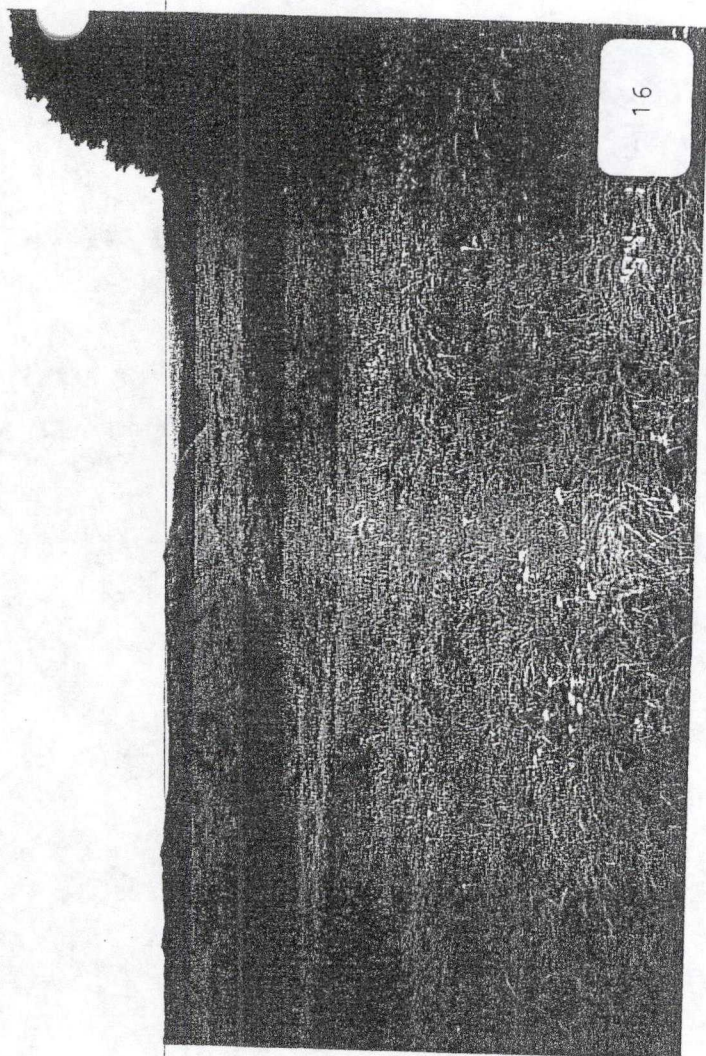




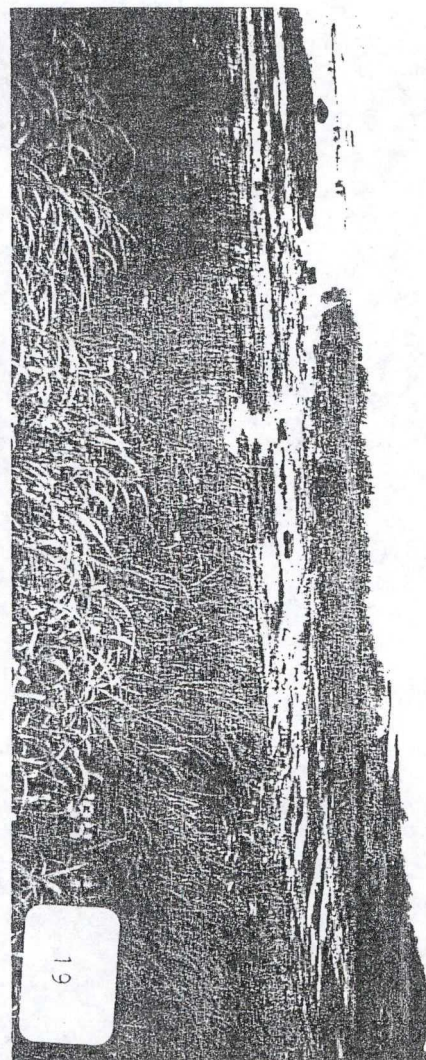
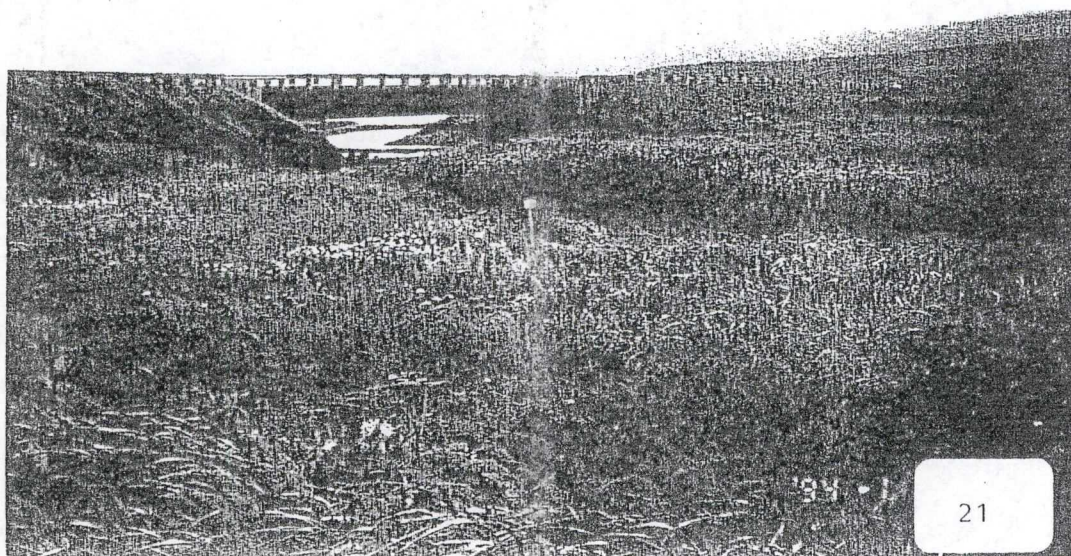
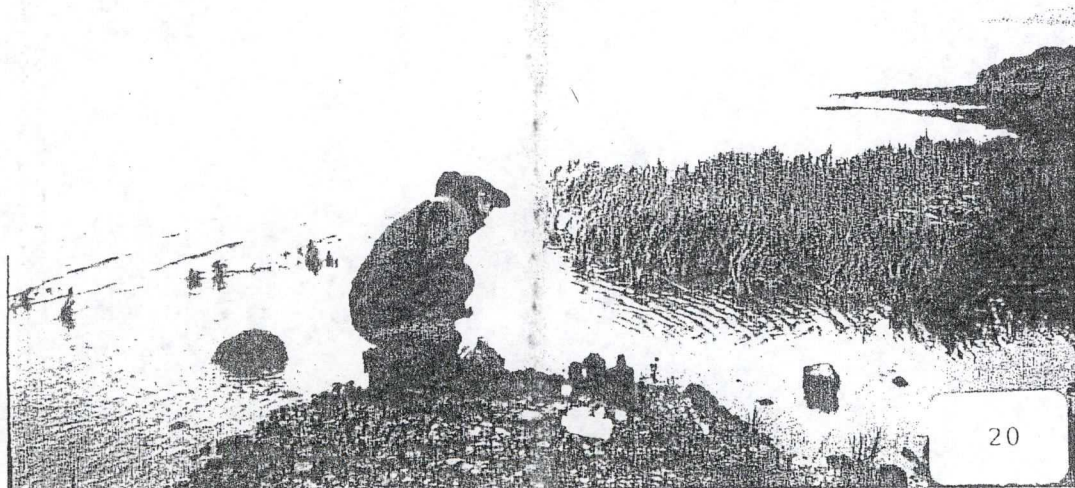




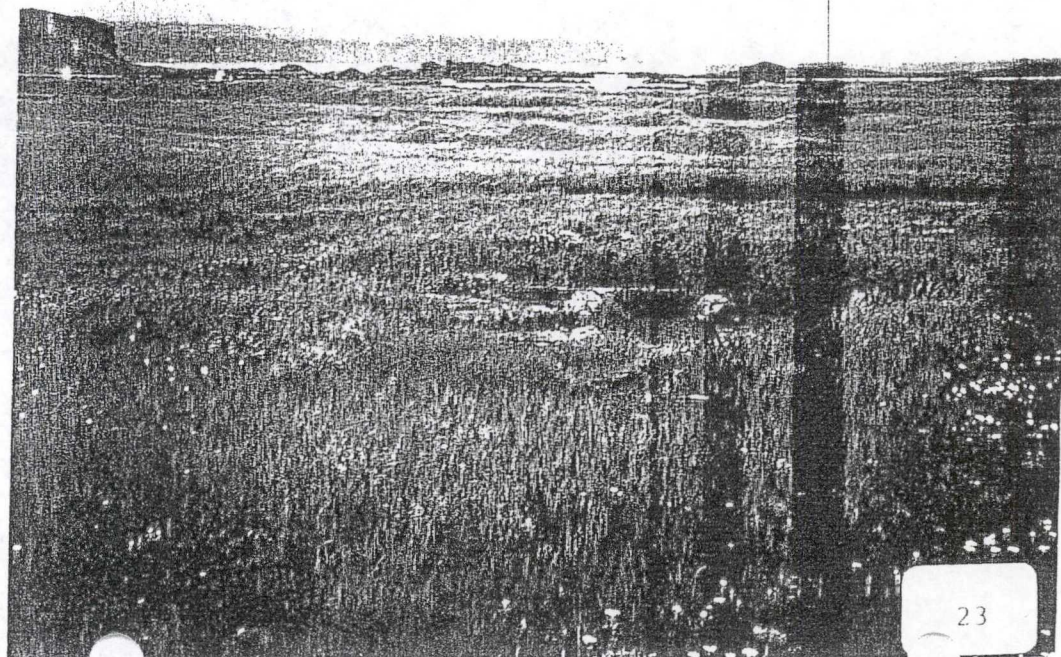
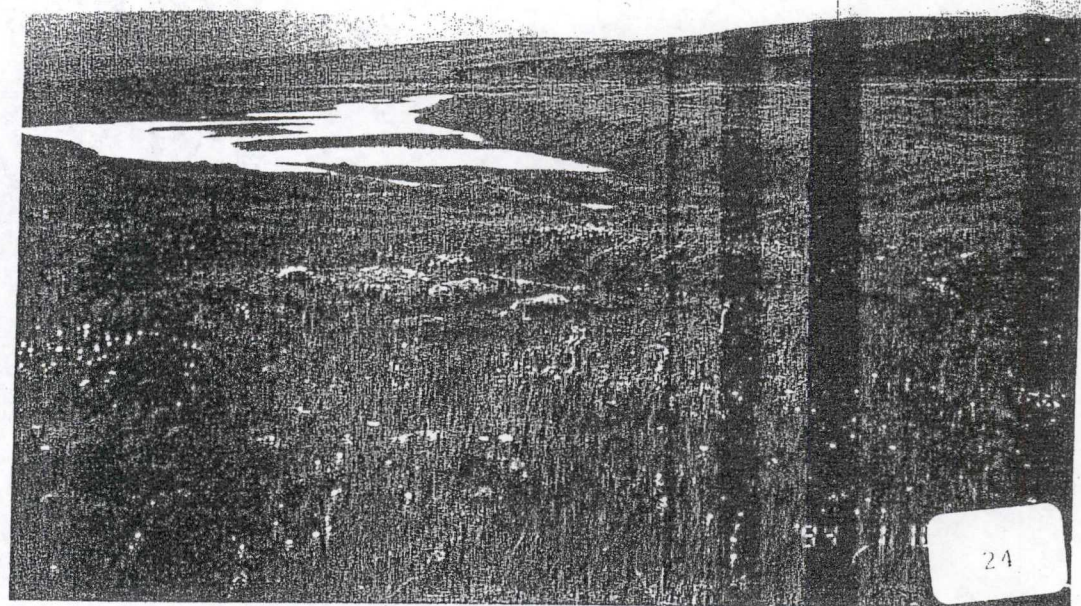
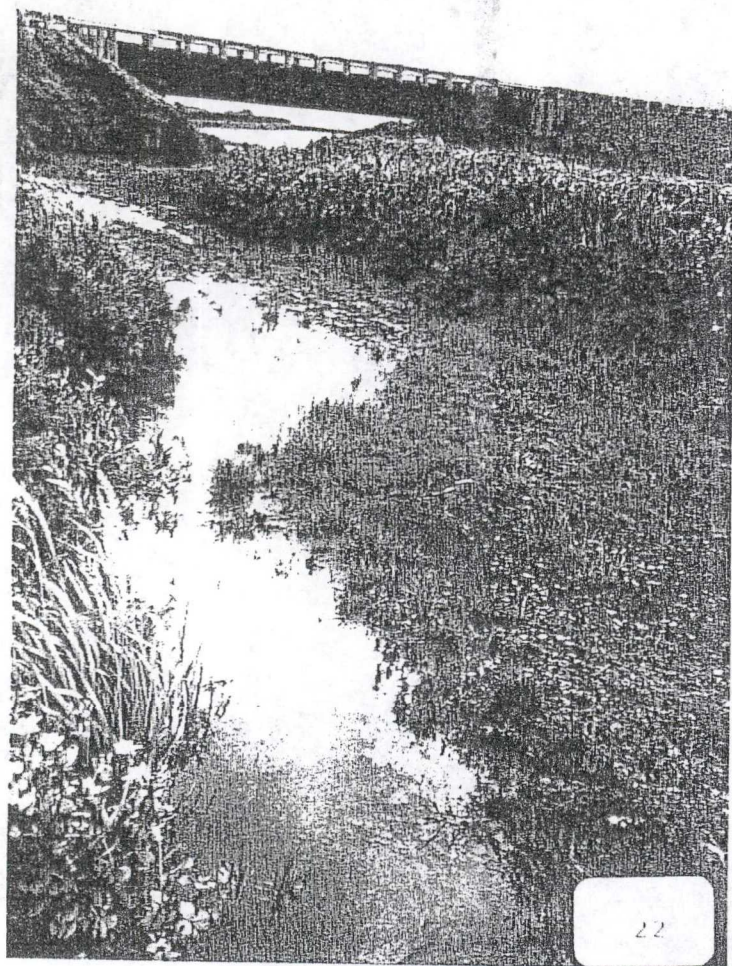




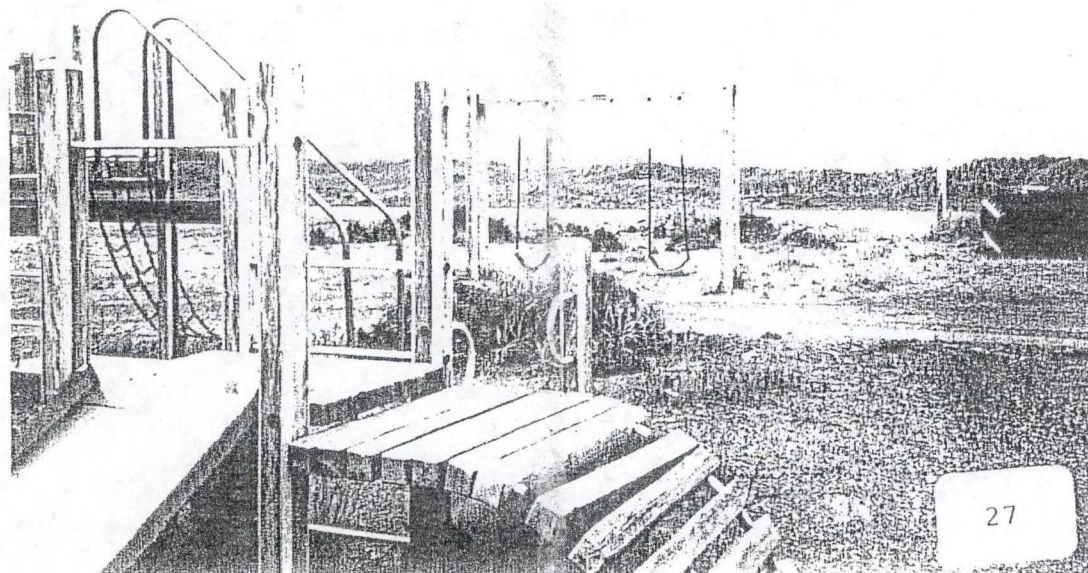




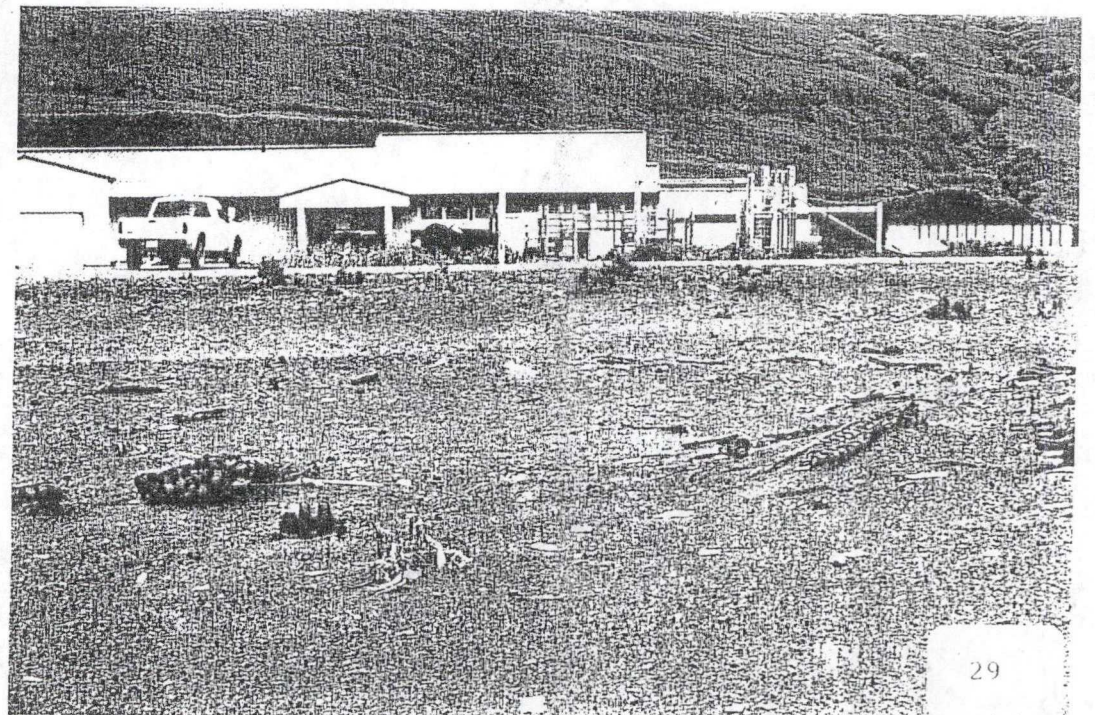
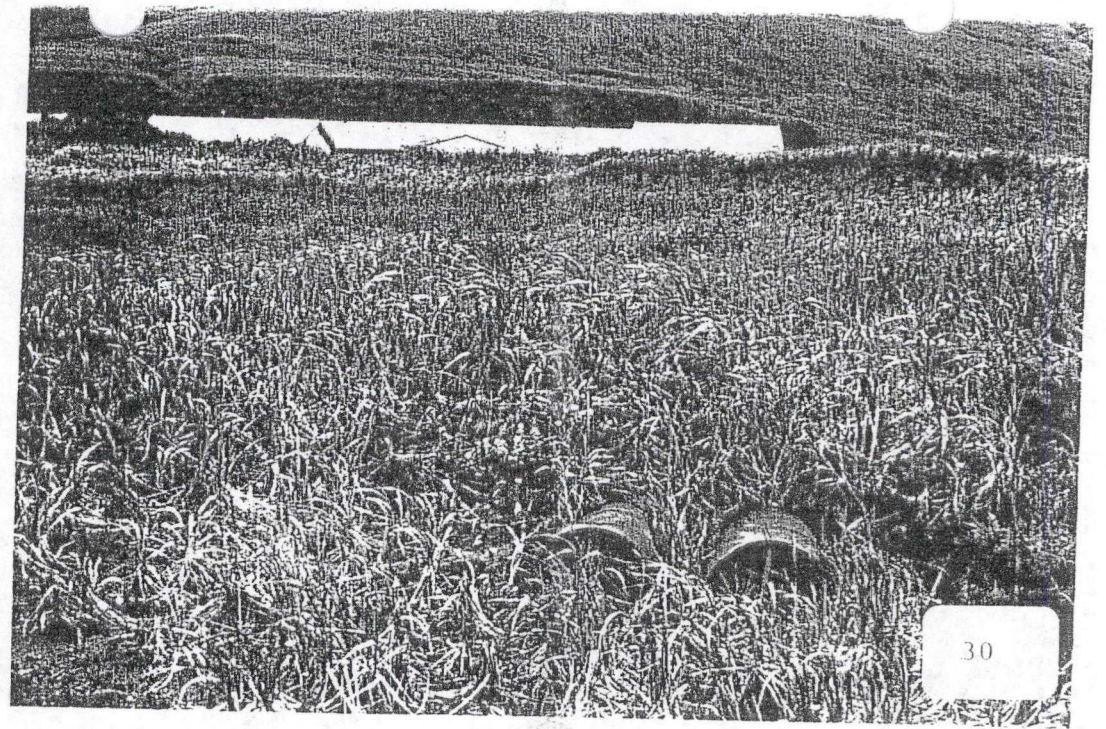
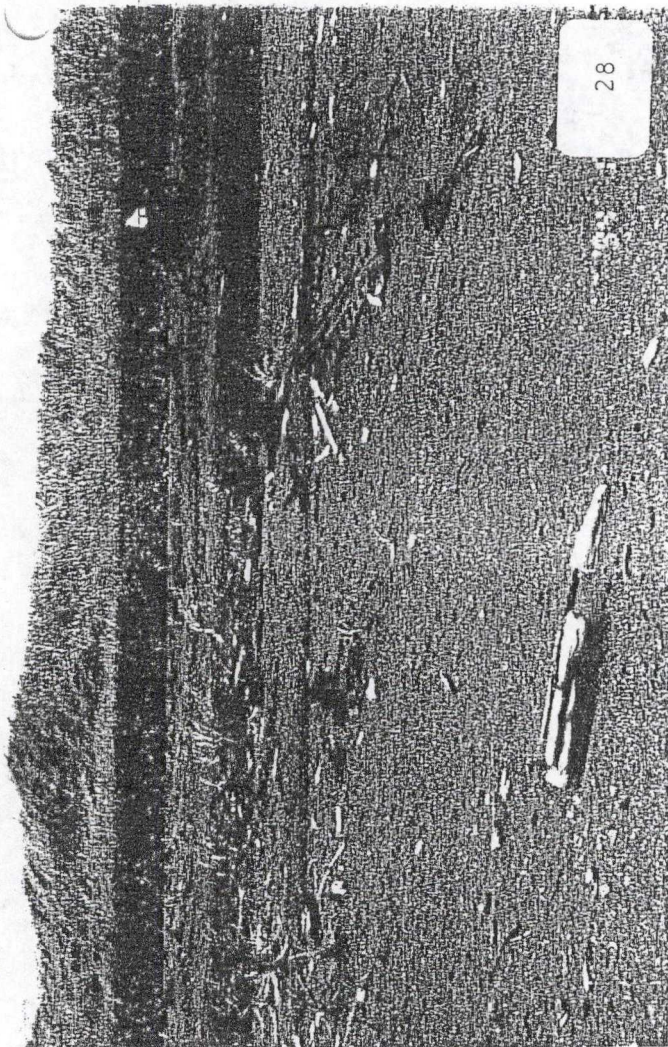




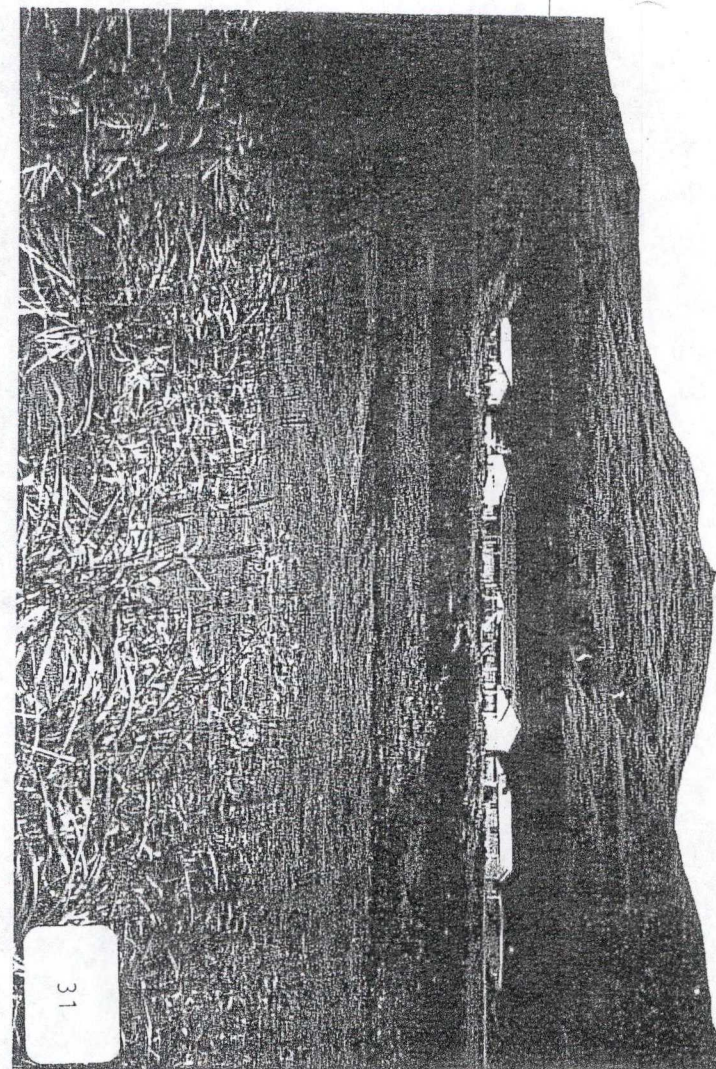
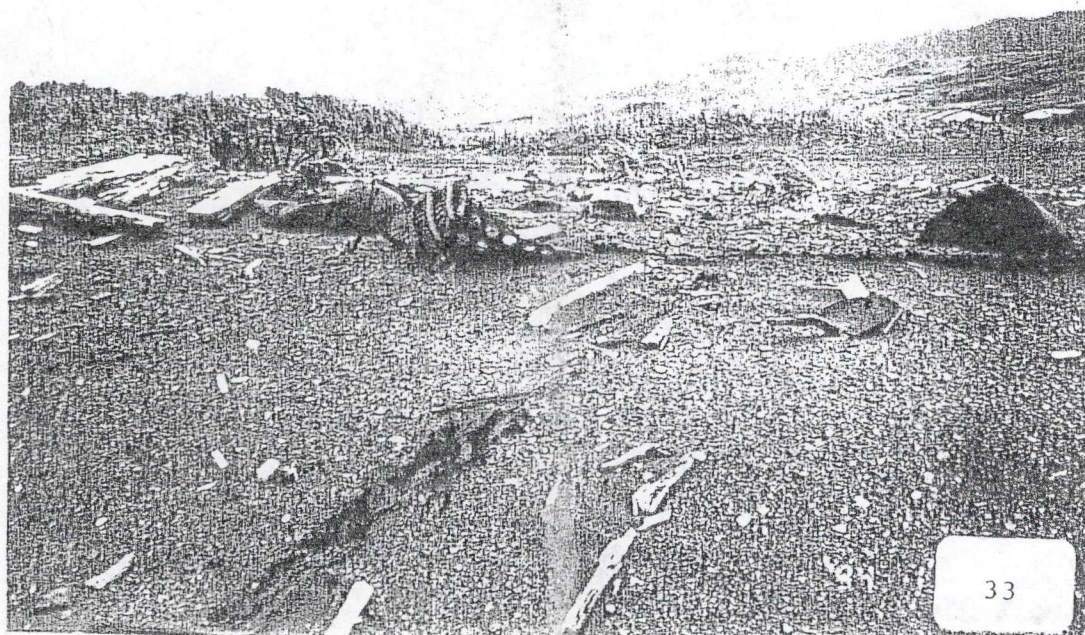
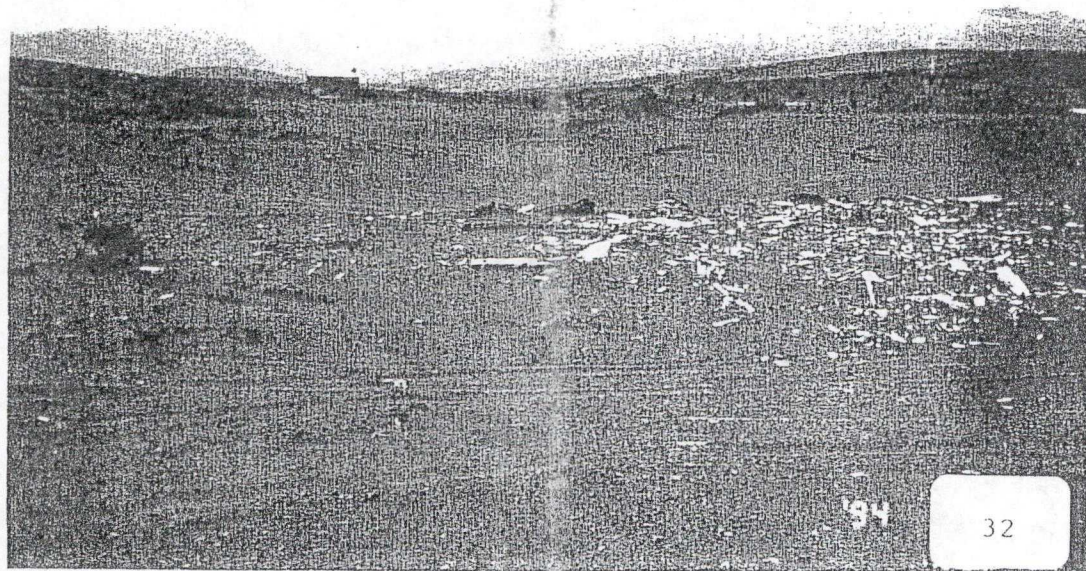




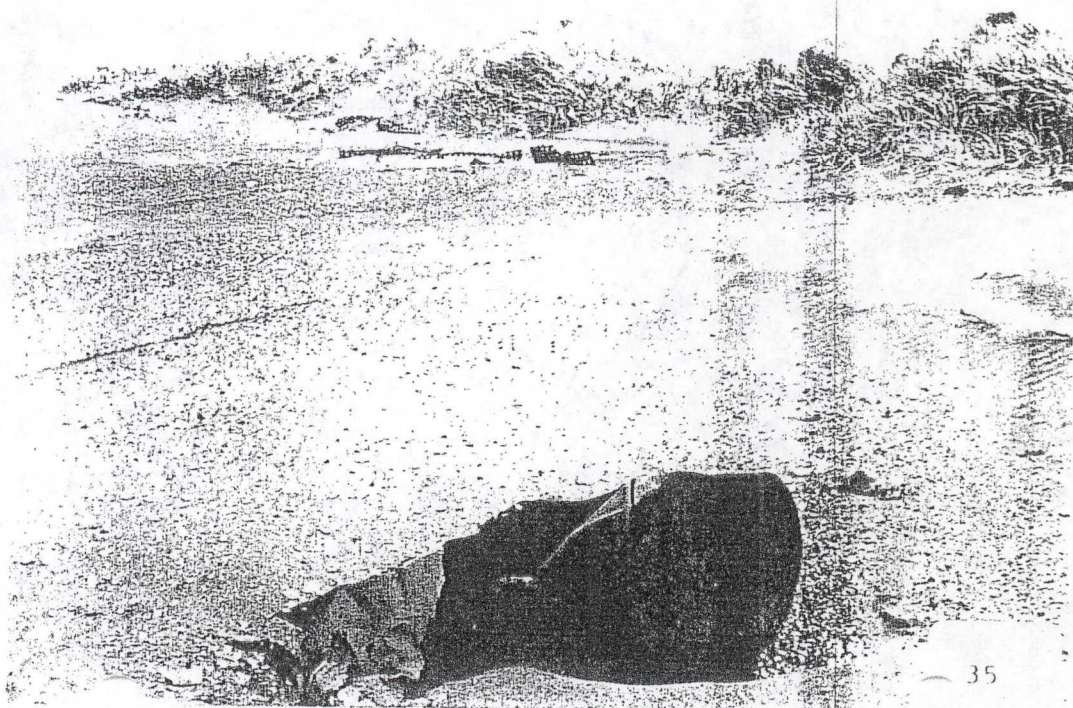
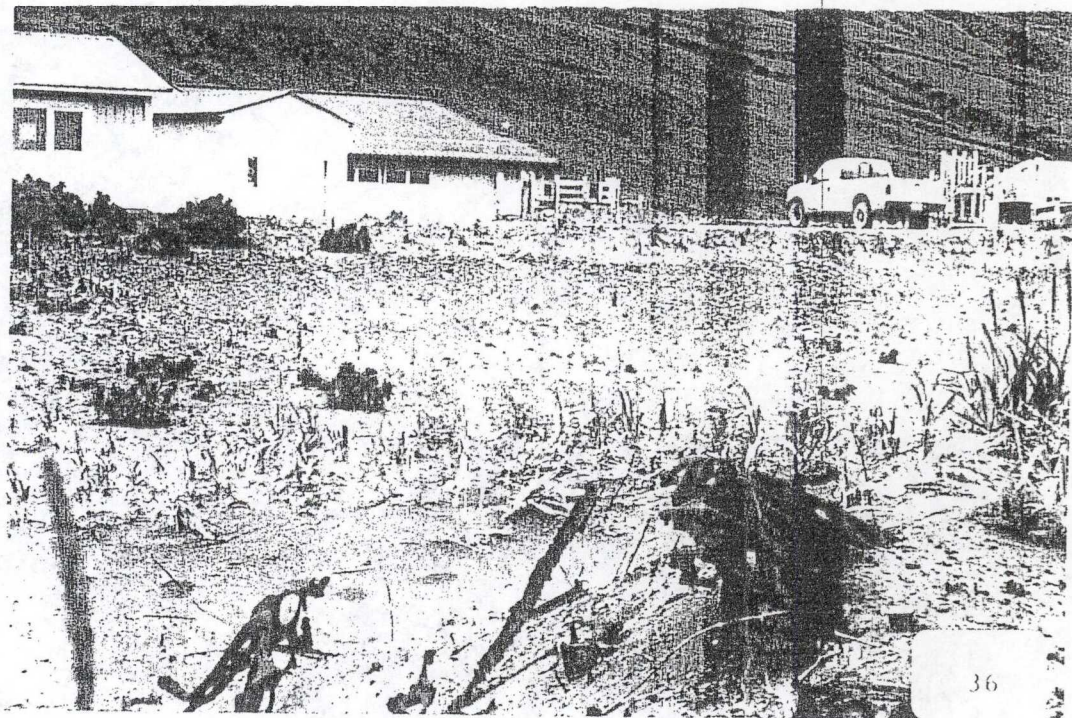
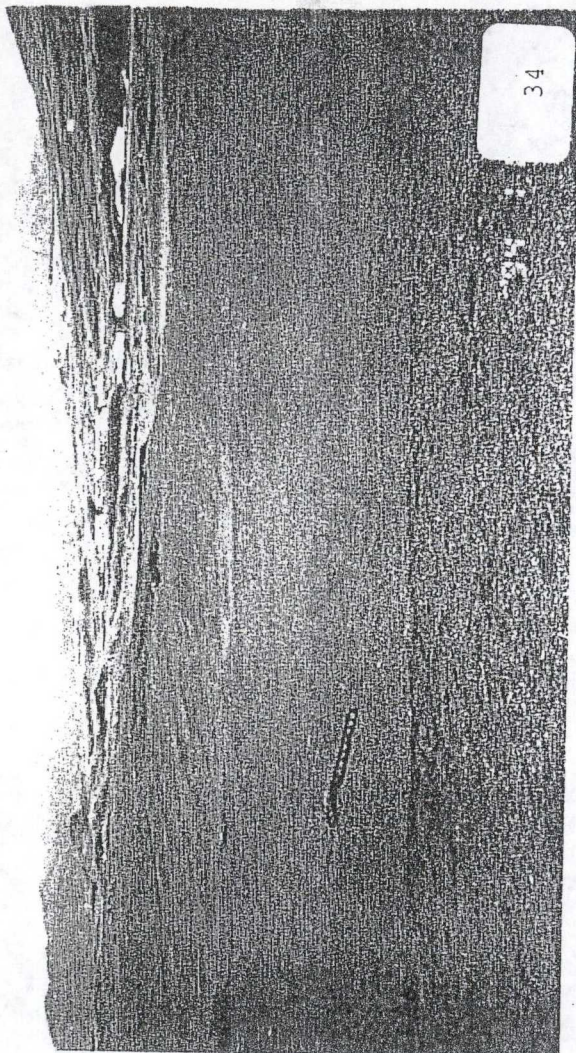




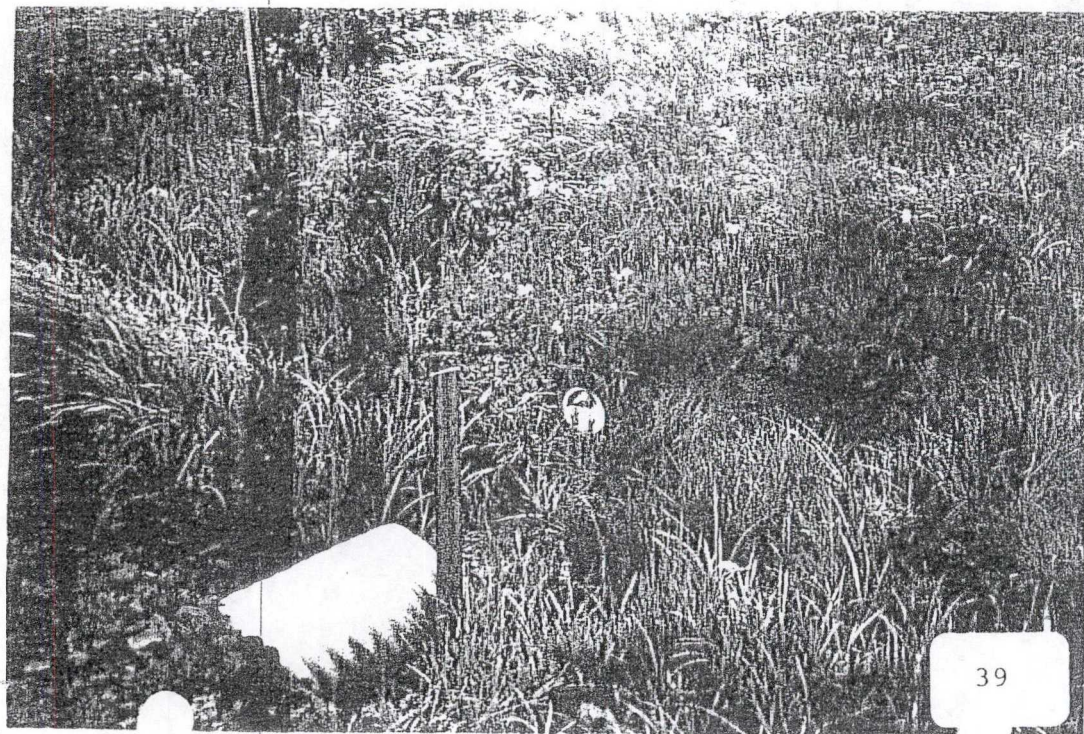
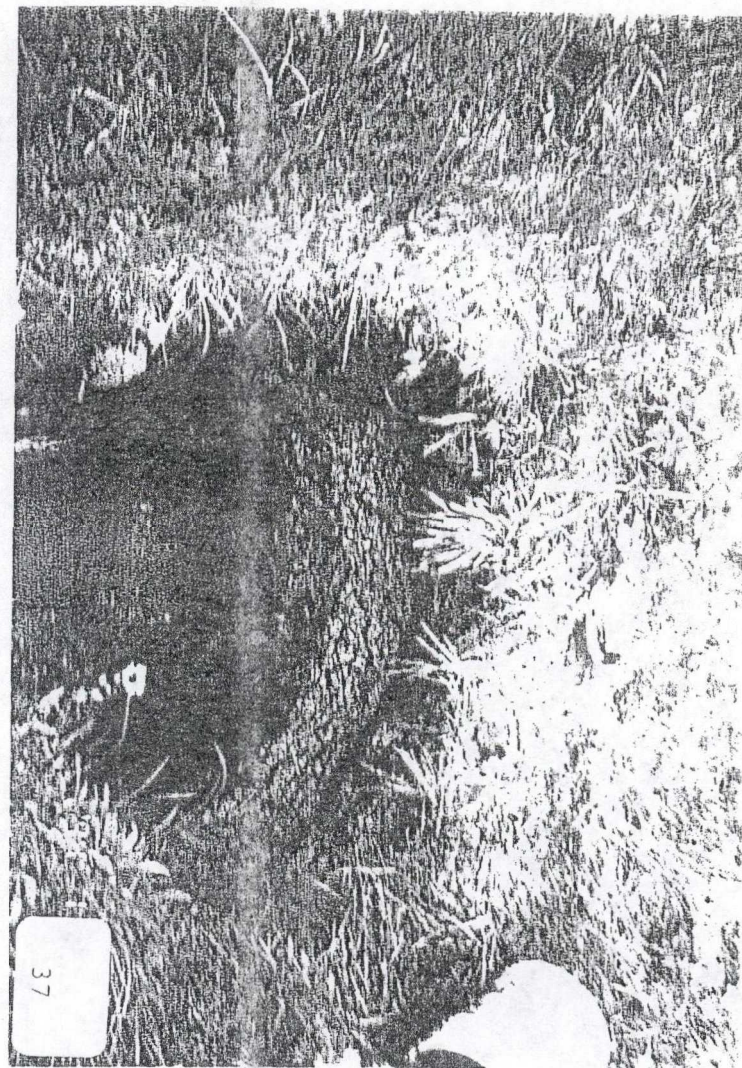
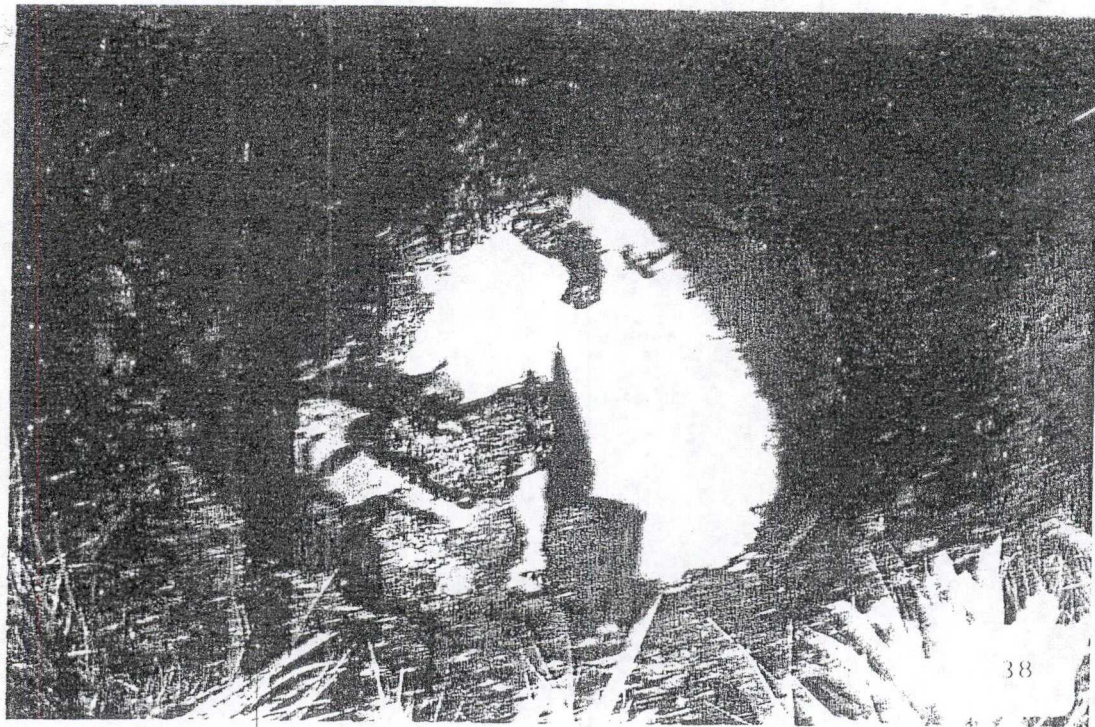
















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## APPENDIX B

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### Laboratory Reports